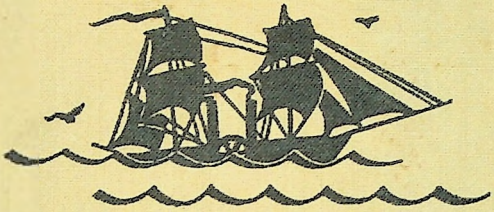

MATTHEW FONTAINE MAURY

MATTHEW FONTAINE MAURY

Trail Maker of the Seas

By

HILDEGARDE HAWTHORNE

DECORATIONS BY
GRACE E. JAMES

LONGMANS, GREEN AND CO.
NEW YORK · TORONTO
1943

HAWTHORNE

MATTHEW FONTAINE MAURY

COPYRIGHT · 1943

BY LONGMANS, GREEN AND CO., INC.

ALL RIGHTS RESERVED, INCLUDING THE RIGHT TO REPRODUCE THIS BOOK, OR ANY PORTION THEREOF, IN ANY FORM

PUBLISHED SIMULTANEOUSLY IN THE DOMINION OF CANADA BY LONGMANS, GREEN AND CO., TORONTO

FIRST EDITION

This complete copyright edition is produced in full compliance with the Government's regulations for conserving paper and other essential materials.

PRINTED IN THE UNITED STATES OF AMERICA

CONTENTS

CHAPTER		PAGE
1.	Westward Their Course	1
2.	Backgrounds and the Future	11
3.	Matthew Meets a Hero and Begins To See the World	24
4.	Here and There, All Around the Globe	37
5.	His Third — and Last — Cruise	47
6.	He Publishes a Book and Breaks a Leg	56
7.	He Begins His Life's Work	71
8.	The First Wind and Current Chart	82
9.	A Great Convention at Brussels	94
10.	His Great Book on the Sea	107
11.	A Stab in the Back	118
12.	Carrying On	132
13.	The Three Years Before the War	145
14.	War	157
15.	England Until War's End	172
16.	Mexican Interlude and England Again	184
17.	The Last Four Years	201
18.	Twilight and Evening Bell and One Clear Call for Me	215

"Am I far wrong when I say that the present state of our knowledge . . . has enabled the navigator to blaze his way among the winds and currents of the sea, and so mark his path that others, using his signs as finger-boards, may follow in the exact track."

Sailing Directions

MATTHEW FONTAINE MAURY

CHAPTER I

Westward Their Course

IT BEGAN to look as though most of Spottsylvania County in Virginia was moving West. Family after family had piled their household goods into wagons, collected their cattle, saddled their spare horses. Some used oxen to drag the wagons and had extra yolks of these walking stolidly with the rest of the cattle. The women and small children rode in the wagons, getting out now and again to stretch their legs, though, of course, the children were in and out as often as they could manage. By 1811, when the Maury family decided in their turn to fare West and take up free ground, Tennessee, where they were to settle, was no longer the wilderness of twenty years gone. Nashville, as Nashborough had become, was a thriving town, the county seat, and the little village of Franklin, about eighteen miles to the north, near which the Maurys were to make their home, had its church and small school, its blacksmith shop and stores. One-track country roads and bridle paths linked the various farms and villages to the town and to each other. Nashville already had a few buildings of stone or brick, even an occasional home of these or of clapboards instead of logs. The Indians had long since been subdued, most of them going farther to the west.

Abram Maury had written back to Richard that Tennessee was as fine a farming country as man could wish, the neighbors good people. Abram had his eye on an excellent site for his brother, within easy reach of his own land, a pleasant little val-

ley with its own brook. Good cotton land, good pasturage, and plenty of forest to supply the logs required for building, firewood or fencing.

"You couldn't ask for anything better, Brother. A fine country for your children to grow up in. With the neighbors to help we can have your cabin ready before cold weather, and you can clear the soil and begin plowing. There are good little shops in Franklin; tell your wife she can get her tea and coffee and bits of finery there, and a good gossip with the other ladies who've come for the same purpose."

Preparations for the departure were already under way, and early in June the big family, taking along a few slaves, started for Tennessee. At the time of this upheaval Richard and Diana had been married twenty-one years. They had married young, she in her teens, he barely twenty-one, and nine children had been born to them. Not all made the trek, however. The eldest daughter was married and settled in her own home, the eldest son, John, was a past midshipman in the Navy, which he had entered at the age of thirteen in 1806, the same year that small Matthew, the fourth son, was born. A lively little fellow of five, he took the greatest interest in the move, and weeks before the start he and Dick, his older brother by two years, who were devoted to each other, had kept the older members laughing with their questions and their plans; they had even dragooned one small negro into helping them build a log cabin beside the great woodpile.

"Matter with this-yere cabin is, it won't keep standin'," small Joe complained. "Seems like jes' nothin' at all lays it all of a heap."

"Reckon a log cabin does take more practice to build so it'll stay standing than a brick house," Dick agreed. "The logs being round is what's the trouble."

"Will our cabin keep a-falling in Tenn'see like this one?" Mat would inquire anxiously of any grownup within hail.

At last they were off, in glorious summer weather, rolling along day after day, skirting the Alleghenies as they neared the Cumberland Gap which led them into Tennessee close to the point where Virginia, Tennessee and Kentucky met. So far they had gone southwestward, now they turned due west, keeping to the north of the Cumberland River, aiming for Franklin. From Fredericksburg to Franklin was four hundred miles as the crow flies, but many a mile more as the oxen tread.

Except for minor difficulties, all went well. The older brother, Walker, with his father and the help of two negro men kept the cortege going, rounding up the cattle, finding each night's camping ground, watering and attending to the horses, bringing in game, yoking and driving the oxen. Diana had brought her faithful and excellent old cook along, with her daughter, who saw to the meals, kept the children clean, did the necessary washing, and watched over small Charles, the youngest, not yet two. When Matthew got tired of the cramped seat of the wagon, older sister Matilda would perch him astride her shoulders and walk along, the two chatting steadily, or when she'd had enough of that, set him on the ground to trot beside her. The miles were far too many for short legs, however. Ten, twelve, sometimes even fifteen a day, according to the country they were crossing. Dick sometimes rode with his father, perched behind the saddle, firmly grasping the belt his father wore.

It was a cheerful, talkative family who enjoyed each other, although the children were strictly brought up, taught never to interrupt their elders, to obey orders without any fussing, to be both considerate and helpful. This made for greater happiness all around, of course, and though the boys had their fights,

the girls their disputes, like any human beings, there was never any whining or nagging. A great affection united the family, a mutual respect.

Richard Maury was pleased with the country as they neared their future home.

"I think we'll soon come to love this country as we've loved Virginia, and here we can prosper," he declared toward the end of the long journey, as the family sat picnicking about a cloth spread on the ground for supper. "Of course, Virginia will always be the old home to us; what with your family having lived there nearly a hundred and fifty years, and my own close on a century, that's to be expected. But the good land is all owned in the Old Dominion now — with our big families we have to spread, and here we'll have room for it." He reached over to lay a hand on his wife's shoulder, gave her a little pat. "Do you agree with your old husband?"

Diana laughed at him. Her blue eyes shone.

"Of course I do. Don't we both come from ancestors who were pioneers, and who built good homes in the new world? I think it's right for us to follow their example, and in our turn build new homes on new land, and make the wilderness blossom like a rose. We'll both be homesick now and then, missing the people we love back there in Virginia, but we have quite a big family right with us, and we're going to be far too busy to waste any time bemoaning the past. I've a hundred plans for our new home, and I want to begin on them just as soon as possible."

"That's my Diana. You've never failed me and you never will. Yes, we'll have plenty to do, good things to do, and we'll be happy doing them. I think the Lord will bless us in this new undertaking, for He must like to see homes spring up where there was only wilderness."

Uncle Abram welcomed them, insisting that the women should

stay in his home while the men worked. He had neighbors ready to assist in the building of the new house, with logs enough, already cut and squared, piled near the site he had tentatively selected. The two brothers walked over the new land the morning after the party had arrived. Richard was more than satisfied with what he saw.

"It's exactly the spot I'd have chosen myself, Abe. Fine outlook, trees for shade, good drainage. In time I'll build a house of boards here, with a veranda. For the present it must be a log cabin, but a good large cabin. The future looks good to me, Abram."

"You'll like it here. And it's a fine thing for me to have you, to have another Maury in Tennessee. Dick, we flourish. Tomorrow, we begin on the building. Today we shall give to celebrating your arrival. My wife has a fine meal planned and several of our neighbors will join us around the table. Come, it's time to get back."

By late fall the new home was ready: solidly built, spick and span, long and low, having gabled ends and another gable over the center door. The flooring in all of the interior was of smoothly planed boards, there were shelves and closets, a sleeping room for the girls, another for the boys, and Richard and Diana, with the baby, had their own room. A kitchen lean-to was attached at the center of the back, opening into the central living room which was also the dining room. There were windows on both sides of the cabin so that sun and air could enter freely. One corner of the living room held the spinning wheel and the frames for weaving, a sewing table and chairs. Much of the furniture had been brought from Virginia, a few pieces were made by a neighbor who was also a carpenter.

Cabins for the negroes had been put up near the main building; chicken coops and rough shelters for the cattle and horses

constructed. The place already looked like a farm, a comfortable appearance strengthened by several acres of plowed ground. Richard had brought his dog with him, a good sheep dog, of English lineage, and one of the neighbors gave Matilda a half-grown kitten, a handsome striped tabby that was soon perfectly at home and liked nothing better than sitting on the sill of one of the sunny windows as the days began to grow chilly, purring amiably when anyone paused to stroke its soft fur.

The family settled down in no time. There were chores for everyone, but there was school, too, for the four elder children: Walker, the oldest son at home, with John a midshipman in faraway waters, Mary, Matilda and Betsy. Dick would begin school next year, with Matthew and Charles to follow, leaving only little Catherine, the baby of the family. The two small boys already had some home lessons, hymns to learn, verses from the Bible. It was the usual habit in the family to collect together before breakfast and after supper, join in a short prayer, then intone verses from the Psalms antiphonally, the different members of the family divided into two choirs. All were musical, all could sing. There was a spirit of gaiety inherent in their French blood, and even though the children were not supposed to speak until spoken to, the father was a friendly, kindly man who, brought up too severely himself, had no mind to continue in that tradition. His children must obey, they must have good manners, but he encouraged them to ask questions, to talk freely to him.

As the acres under cultivation increased there was more and more work to be done. By the time Matthew was eight and Dick ten they could milk, hoe, and pick cotton. There was plenty of good food produced right at home: beef, mutton, pork, smoked ham and sides of bacon, vegetables in season. Fruit trees planted early had begun to yield. Buckwheat cakes, from grain

grown on the farm; molasses bought in the village; hot biscuits, one type the children adored being made with beets as a foundation. Chickens and ducks, with their eggs; pigeons; game when there was time to hunt, and fish. Whisky for the men when neighbors dropped in, or when passing strangers were put up for the night, tea and coffee, milk of course. Deer, bear, raccoons were plentiful, with the primeval forest framing the cleared ground.

"Mammy, seems to me you cook better every year you live," Richard told the cook after one specially good dinner. "That corn pone alone was fit for the Emperor Napoleon himself, poor man — when he was still an emperor." This was late in the year 1815, and not long after the news of Waterloo on June 18 had reached the Maurys in Tennessee, for news had leaden feet in those days. "Which proves," concluded Richard, "that it's better to be a farmer than an emperor."

Being of French descent the thrilling events in their ancestral homeland had been much discussed by Richard and Abram, so that even the children and the negroes had heard of the distant events in la belle France.

"Laws, Massa Richard," replied the gratified cook, "I'd sure be proud if I could send that poor man somethin' 'd take his mind offen his troubles." Smiling, she dropped a curtsy and returned to the kitchen.

Richard grinned across the table at Diana.

"I'd rather like to know just what Mammy's idea of an emperor is," Diana remarked, smiling back. "A gentleman to feed, anyhow."

When young Dick began to attend school, Matthew pleaded to be allowed to go with him. The two were inseparable, and Matthew, for all he was two years the younger, could read as well as his brother. His parents were content, though his father

told him that if he did not study well and behave himself as though he were his brother's age, he would not be permitted to continue. For Matthew had not proved too good at farm work. It didn't interest him, and he particularly detested picking cotton — hot, monotonous job. Once he had yanked the bolls off and stuffed them into a hollow tree as a simpler way of getting rid of the stuff, with a spice of adventure, since he knew discovery would bring dire results. Which it did, but without making him any more of a farmer.

School was another matter altogether. He loved it, he excelled there.

The Old Field School it was called, a one-room log structure, with split logs for the children to sit on, and a slightly tilted board, running the length of each row of pupils, as a table. Elementary courses in reading, writing, spelling, geography and history were given by the man teacher. Recitations were sung in unison, as was very much the custom in that period. The spelling book was Webster's well-known volume called the *Blueback* because of its binding. This was the first book Matthew had ever used, his home lessons having been oral.

Until after his eleventh birthday this school had no more faithful student than young Maury. By that time he had about exhausted its possibilities and was reaching the time when he would leave off study and take on farm work again. He confided to Dick that he didn't look forward to this future with any enthusiasm.

"Dick, d'you think Father would let me go to Harpeth Academy? There's lots and lots more to learn and I want to study it all. I don't want to stop now. I don't want to go back to farming all the year again. I don't mind doing some farming — but I want schooling, too."

The two were trudging back to the house. It was early Octo-

ber, the crops were in, and the new school term back in operation, summer vacation being a time for good hard farm work when all hands were needed.

Dick shook his head. "What more d'you want to know?"

"I'd like to know as much mathematics as old Mr. Neil. There's nothing he loves more than mathematics. When I take shoes to be mended to his shop, I often find him working away on a piece of leather with his awl, scratching little x's and y's and muttering over them. Seems they're problems, and he's told me about them — algebra, he calls it. He's told me enough to make me want to learn it, and beat him at it." The boy's blue eyes shone. "I reckon he'd be surprised to see me tackle one of those problems he toils over, and solve it."

Dick laughed. "I reckon he would. But I don't think Father'll see it your way."

"No, I reckon not," Matthew answered, glumly.

But it soon turned out that Fate was on Matthew's side. Fate's first move, however, looked anything but beneficial. For Matthew, climbing a nut tree, slipped, fell, and hurt his back so badly, besides biting his tongue almost in two, that he had to keep his bed for weeks, and even when he was able to be about again, his father felt that farm work was far too heavy for him. By then he knew Matthew's desire to go to Harpeth, talked it over with the boy's mother, and agreed that it seemed the best thing to do.

"I'd rather like to see you become a doctor, Matthew, since you're going to be a student. There's a great need of doctors, and I know you'll never make a farmer, even if you grow strong again, as I think you will."

Matthew was radiant, and Dick was almost as happy as he over it. The fall and the suffering of his chum had hurt Dick. But now his brother was going to have his heart's desire, and

in time his back would be as good as ever. The Academy was not quite three miles from the Maury farm and, as soon as Matthew could ride the distance, he was entered. The brothers continued their close companionship. Before this they had planned that they would always live together, that each would name his eldest son after the other, that always they would share each other's joys and sorrows.

Matthew had passed his twelfth birthday, January 14, 1818, when he entered the Academy, his first step in the right direction, on the destined way. He was jubilant, and as he rode past the tree from which he had fallen, he waved his hat in salute, grinned, then called out "Thank you, sir," in a grave voice.

The tree had done its part; but the boy himself had known what he wanted, what he must have. Already his passion was to learn, to know, to achieve. That passion was to take him far, to make him one of the highly distinguished men of his country, known and honored the civilized world over.

But now he was just a happy boy, eager to get started on the new pathways of study opening ahead. He shook the reins of the old horse he was riding, which obediently broke into a lope. Not Pegasus, certainly; but then, it was not poetry, but science, which was Matthew's lodestar. Nevertheless, there was a deal of poetry in the lad's composition.

CHAPTER 2

Backgrounds and the Future

YOUNG MAURY'S decision to follow, not the plow, but a profession, his keen interest in study, were inherent in his blood. On his father's side he drew from two distinguished Huguenot families, the Maurys and the Fontaines, already connected by marriage, who had come from France in 1714, to follow their chosen callings of teachers and clergymen in a country where they could be free to worship according to their faith. Ever since that freedom had ended in their mother country with the Revocation of the Edict of Nantes in 1685, the Huguenots had suffered an endless persecution. Many had emigrated to other lands, notably to the Island of Jersey, which little part of Britain became almost entirely French, many others to America, and particularly to Virginia.

This emigration increased after the final defeat of the fighting Protestants of the Cevennes, under Jean Cavalier, early in 1705, until altogether more than four hundred thousand Huguenots, most of them the very salt of the country, had left France forever. First-rate citizens, they were welcomed and treated with honor in the countries of their adoption, soon identifying themselves with the British elements, intermarrying freely, heading schools that prepared their students for the universities of England, becoming ministers of the Church of England or, as it later came to be called in America, the Episcopal Church, which, in Virginia through the Eighteenth Century, was the one Protestant church of any importance.

Matthew's grandfather, the Reverend James Maury, was an Episcopal clergyman and a teacher with his own school in Walker Parish, Albemarle County. He was a delightful man, filled with enthusiasm for the great country into which he had been born, and especially for the Northwest Territory, that vast extent of land north of the Ohio River and westward — well, it was hardly known how far. The map of the North American Continent was largely filled with vast spaces either totally unmarked or designated as deserts. In 1787 one such space was named the Northwest Territory by Congress. But it was long before that, when the Reverend James, poring over this map, where the lower reaches of the Mississippi were clearly indicated and the mountain ranges farther west hazily suggested, insisted to his students that there must be another great river to the north and west. He even marked out its possible course, nor was he so far from the actual course of the Missouri, although that stream had to wait for Lewis and Clarke to be safely drawn upon the map. Three of these students of his were to become Presidents of the United States. Among them was Jefferson, who was particularly interested in Mr. Maury's theory, so much so that, years later, he tried to get the African explorer, Ledyard, to make an expedition into that part of the country. But although Ledyard was interested, it somehow couldn't be managed.

The first Fontaine of whom there is mention was also a Huguenot clergyman, Jaques, or Jean Fontaine, or, as it was then, de la Fontaine, born in 1500. He was a man of importance in the court of Catherine de Medici, then Queen of France. A powerful and vindictive woman, she was greatly angered by the Huguenot's refusal to cease preaching sermons in which a a great deal of vigor and fire helped emphasize the Protestant point of view. The outcome was tragic. One night, in 1563, a

gang of ruffians broke their way into the preacher's house, murdering both him and his wife.

Fortunately his three sons with their families were able to escape to England. The descendant of one of these, Jean, or John as it became, was the first Fontaine to reach Virginia, arriving in 1714. The Governor of the Colony, Spottswood, made him one of his Knights of the Golden Horseshoe, a group of adventurous souls led by the Governor on an exploring expedition in 1716 beyond the Blue Mountains to claim the land for the King of England, George I. Either by letter or on a visit back to England John Fontaine persuaded his brothers and other relatives to come to America. Among those who emigrated was his sister, young Mary Fontaine who, with her husband Matthew Maury, settled in Albemarle County.

John Fontaine had kept a diary full of all manner of interesting detail concerning the new country, including the glorified picnic with the Governor. This diary was lost for a hundred and fifty years to be discovered at last in an old chest in the Fontaine home in Rock Castle, Hanover County, by our Matthew Maury's uncle, another James Fontaine. Greatly interested, Mr. Fontaine translated the manuscript from its original French, and got one of his nieces, Ann Maury, a cousin of Matthew's, to edit it for him. Later it was published and may still be found in libraries today, a carefully treasured item.

Diana Maury, Matthew's mother, was one of the many descendants of the Englishman, Dudas Minor, who came to Virginia with his wife in 1665, with the grant of a great estate from Charles II. Charles, and Good Queen Anne, too, were very generous to those whom they considered deserving, or whom they liked, with these Virginian acres. The Minor family was also given to having many sons and daughters, and branches were established in Louisiana, Missouri, Kentucky and the Caro-

linas. But the main stock remained in Virginia, on the splendid plantation in Caroline County named Topping Castle. The Minors were wealthy; the sons were all educated at Oxford or Cambridge; they owned many slaves and gave grand parties and, when the Council and the House of Burgesses met in the Capitol at Williamsburg and the city became a glittering center for all Virginia's ruling class, the Minors always visited there to join in the festivities and take a hand in the government.

The Revolution brought changes, but the great plantations continued to flourish, and the leading families, except those who had thrown their support to King George, many of whom returned to England or went to Canada, still held the ruling place. Their sons had fought for the Cause as leaders and officers, and it was natural that they should take the lead in guiding the new country.

Maury was following the tradition, therefore, when he entered Harpeth Academy. Possibly he held in mind a college career at William and Mary as a sequence, with medicine or the law as his future profession. Circumstances were to lead him in another direction, but for the present he happily made a mark for himself at the Academy. Three men of unusual capacity taught there, men still young, beginning careers of importance. Dr. Blackburn, at the head, later became Chaplain to Congress; Mr. James Otey was to be the first Bishop of Tennessee; while William C. Hasbrouck, whose family lived in New York, returned there to become one of that State's leading lawyers.

Latin was then the taproot of education. Dr. Blackburn took care of that, and gave Matthew the grammar to learn as his first step. One week later the boy had completely mastered it, to the amazement of his teacher who declared it was a record for the school. Young Maury had a gift for languages, and came to know many the world around, but he also had a gift

of application, of absorption in what he was working on, a warm enthusiasm for the job in hand. The three men under whom he now worked developed both the affection and admiration for the lad, which was to become an enduring friendship, lasting through the lives of each, deeply appreciated and heartily returned by Matthew.

Matthew graduated from the Academy at the beginning of 1825, when he was nineteen. The six years had given him a fairly solid education although, except for mathematics, there was very little of scientific teaching as we think of it, and it was science which most attracted his interest. He knew, however, what he meant to do after graduation.

Throughout Matthew's childhood and boyhood letters had come from far ports the world around, sent by brother John, who had become a distinguished young officer in the Navy. A few times, too, the sailor came on furlough to visit his family, and to relate adventures and sea yarns. Naturally he was a figure of romance and great deeds to his brothers and sisters, particularly after the war with England ended in 1815. During the three years it lasted, the Americans had been consistently beaten on land, but had won spirited victories on the seas. It wasn't only the war that made John stand out, however, it was an adventure that started just before the war, when, having been allowed several months' furlough, he sailed as first officer under a Navy friend of his, Captain William Lewis. Lewis was also on furlough, having asked for it to gather wealth in a trading journey to China, a not unusual procedure in those days. So, early in 1812, when John was nineteen, he sailed in the merchant vessel the captain had chartered.

When the ship reached the Marquesas, she hove to in the port of Nukahiva Island to refill water tanks and take on fresh fruit, cocoanuts and so on, badly needed after the long run.

The king proved friendly and, after discussing the matter with John, Captain Lewis decided to leave him, with five sailors, to gather a load of sandalwood and other island produce for which a market could be found back home. There could be no exact date as to when the vessel would be back, but the captain expected to reach China by June, hurry his trading, and return along the something like three thousand miles between the two ports, within three months at most.

The three months passed, others followed. John and his crew, helped by natives, had gathered sandalwood and other stuff enough to load two ships, and they began to be worried. Had the vessel been lost? And if so, what would become of them? The tiny island was no general stopping place, no regular port of call.

They kept tally of the time with notches on a great tree — twelve months, eighteen, and still never a sail. To add to the difficulties of existence a second king turned up, an enemy king. The island was divided by a volcanic ridge, the two sides inhabited by rival tribes, and wars began every now and then. One of them broke presently. In the attacks on their king's village which followed, four of the sailors were killed. Joe Baker, the remaining man with Maury, then built a hut in the tops of four palm trees growing close together, reached by a ladder they made of ropes fortunately brought to shore with other paraphernalia. Here, the ladder once pulled up, they were snug, and here, when fighting was in process, they stayed. By now they had only a few rags of clothing left and were burned almost as brown as the natives.

At last, a sail, a sail! A large square-rigged ship followed by smaller vessels was presently putting into the harbor. John and Baker stared as she dropped anchor, and cheered as she broke out the American flag. In no time they were hustling with the

natives to one of the canoes lying on shore and out they paddled, quite forgetting that they no longer looked like white men, being dark brown and clad with the same careless regard for the proprieties shown by their native friends. The canoe was shoved away when it came alongside, the proper emphasis given by muskets in the hands of a guard.

So they paddled back, to await the arrival of the ship's boat, already being lowered. Eagerly the two watched as she drew close, and to Maury's wild joy, among the armed men and officers aboard, he recognized an old shipmate, Lieutenant McKnight. As the boat grounded John gave a hail:

"What-ho, McKnight!"

There was great delight all around, and then McKnight took his friend back to the ship with him, Baker being taken care of by the sailors. Clothes were the first consideration, and a smart haircut, then a good strong grog and plenty of talk. Of course John knew nothing of the war which was still going strong.

"Your ship is probably tied up in a Chinese harbor, Jack. War was declared by us on Britain, June 12 of 1812 — "

"Good God, Mac! And me on this island more than a year and a half — two years this coming April. Of all the rotten luck."

"Never mind. You'll see action from now on. This ship has already made a name for herself; as you see we have a few good prizes along. There's been talk of you, my boy. Thought you'd gone down with all hands. Your people will be glad to find you aren't so easy lost. But come along, I want to take you to the captain. It's Captain David Porter, you know, and a great man. You'll like sailing under him."

The ship which had rescued the two lost men was the *Essex*, and had done excellent work on both the Atlantic and Pacific seas since war broke. She was accompanied by several small

vessels, merchantmen she had captured, and one fine fast ship Porter had renamed the *Essex Junior*. Porter had heard of Maury, welcomed him with a hearty clasp of the hand, and told him he was found just when he was needed:

"I'm staying here a few days while we finish arming and equipping the *Junior*, and making Downes her commander. He needs a first lieutenant, but I can't spare any more of my officers and you'll fill the berth perfectly, Maury. It was a lucky day all round that sent us to this port. But McKnight tells me you looked a deal like one of the natives here when he first clapped eyes on you."

"I was getting to feel like one, too," Maury answered, as they all laughed. "Thank you, sir, it will be a great thing to tread a quarterdeck again."

The friendly king was given presents to reward his faithful care of the two white men, and the warships set sail for Valparaiso; the smaller prizes, however, being sent straight on to a home port. They reached the South American port late in February, attended to whatever business had brought them, and were setting out to sea again when two British frigates, the *Phoebe* and the *Cherub*, coming with orders to capture the *Essex*, hove into view. Captain Porter signaled the *Essex Junior* to continue, if she could get away. She was very fast, and she made it, slipping by in spite of the efforts of the Englishmen to stop her. But the other vessel had to turn back to the safety of the neutral harbor. There she lay until March 28, when Porter decided to make a run for it. Unluckily, rounding the point, a heavy squall struck the *Essex*, carrying away her fore topmast. The English ships closed in, Porter cleared the decks for action, but after a fierce fight had to surrender. He was given his parole and, with a young midshipman whom he loved like his own son, was permitted to return to the United States. This

boy was David Farragut who in his own time was to prove himself great on the seas.

A month before this fight the *Essex Junior* had reached a southern home port and John was able to send letters to his family and to communicate with the Navy. He remained until orders came for him to join the *Epervier,* a captured British sloop-of-war, to the north in Norfolk Harbor.

He started at once but the coastwise vessel he was aboard was greatly detained by bad weather and when he finally reached Norfolk it was only to find that the *Epervier* had sailed. He was then allowed a furlough and traveled to see his family, where he was welcomed like one come home from the dead. He could not stay long, having orders to proceed to Lake Champlain and join the American squadron there under Commodore MacDonough.

He got there in time to join in the splendid victory over the British squadron which was acting with the invading army coming in from Canada. On September 11 that squadron was decisively defeated, putting an end to the land attack as well. In a letter Maury wrote after this victory to a friend of his in Fredericksburg, Virginia, he gives an interesting glimpse of the extremely loose bonds between the states in that day.

"It was a glorious victory," he wrote, "and I hope the first fruits of it will be to confirm the wavering allegiance of New York and Vermont to the Union. They have been threatening to secede unless peace is made with England on any terms."

As soon as John got back from this victory he married his first cousin, the daughter of one of his uncles, Fontaine Maury. He had been engaged to her before leaving on that unlucky trading ship. She had never faltered in her belief that he was living and would return, but the letter he wrote her, when at last he reached his native shore again, must have brought heaven to

her. Moreover, they had another reason for thanksgiving. Had he caught the *Epervier* she would never have seen him again. It sailed to disappear forever with all hands.

Later John Maury was to see more fighting. The pirates of the West Indies had become a terror to all the ships sailing the seas to the south and it was decided that they must be completely destroyed. Commander, now Commodore Porter was selected to manage the dangerous business, given a squadron and the liberty to select his own officers. He at once chose John Maury to be flag-captain of the fleet, a very important position, since to this officer fell the duty of issuing the orders for all the movements of the fleet.

It was a grim and savage business, this finishing off of the pirates. No quarter was asked or given on either side. Bitter fighting that meant, and one by one the pirates were sunk, put to the sword or taken prisoner — later to be hung. Many of the Navy's men and officers were lost. But John Minor Maury came through safe and sound.

Commodore Porter, the business over, gave his flag-captain not only a furlough, so that he might have time at home with his wife and their two children, both sons, but also the signal honor of taking to the President his own personal report on the successful ending of the operations. With joy in his heart, John Maury sailed, aboard the storeship *Decoy,* for Norfolk Harbor.

On the way he fell ill of yellow fever and died just as the ship reached the harbor. Here, because of the danger of infection, he was at once buried under the salt water he had loved. He was thirty-one, and judged by many of the best officers in the Navy to rank at the very top of the profession. This was in June, 1824.

The shock to the family was severe. The loss of his brilliant

first-born struck deep into his father's heart. He aged visibly, and Diana devoted herself to him, pouring her own grief into the comforting and tending of her husband; the children suffered, too, but they had seen so little of their brother since the move to Tennessee and his entry into the Navy that there was not the sharp personal pain of daily missing his presence among them. On Matthew however his brother's death had a direct effect. From the moment the news came, he knew where his own future lay.

One of Richard Maury's sisters had married Edward Herndon, of Fredericksburg, whose younger brother, Dabney, although a number of years older than John, had been his devoted friend, and it was he who took the news of the captain's death to the young wife who was waiting, with her two little children, for the expected arrival of her husband. The second boy was named after Dabney Herndon, and the two families saw much of each other. Dabney had several children, the eldest, a daughter, Ann Hull, twelve years old.

It was a bitter errand and when the first shock of grief had passed Dabney took the young widow's hands in his:

"My dear, I cannot attempt to comfort you. My own grief — my own sense of loss — tell me a little of what you must bear. But I have come to ask you to bring your boys and make my home, your home. My children and yours are almost like brothers and sisters already. No sister could be dearer to me than you, and I know you and my wife love each other. My house has plenty of room, as you know — through my brother Edward we can call each other cousin. We all want you. Give us the happiness we ask, my dear."

And so it was arranged, proving itself in every way a happy arrangement. Dabney was the leading banker of Fredericksburg, a wealthy man, and his great house was run with the

lavish hospitality of the South. Slaves kept it in order, there was always a mammy for the youngest child, and another to watch over the older children. The young widow had her pension, and some money of her own, so there was no feeling of dependence. Soon the two families were like one family, a united and happy household.

Before his brother's death Matthew had considered going to West Point after graduating from the Academy. He had broached the idea to his father, but the reaction was violent. Certainly he would not go into the Army if Richard could prevent it, and he was to say no more on the subject. Richard was about as angry at "the ridiculous notion," as his son had ever seen him. So the plan was dropped. And it was doubtless because of this that, when the boy decided to follow his brother John's career, he did not speak of it at home. Early in the spring of 1825 he got into touch with Sam Houston, then a Member of Congress from Tennessee and only at the start of his remarkable adventures, whom Matthew had met in Nashville when Sam was campaigning, and who was well known to his father. In due time Matthew received his midshipman's warrant and was due to go to Washington at once and call upon the Secretary of the Navy.

When Richard heard the news, he was dumbfounded.

"I shall not forbid this step on your part. But I wash my hands of you from this moment. Not one penny will you get from me, sir."

Matthew was sorry, but his determination remained fixed. It was his life that was in question. He had not been hasty; he had thought it out carefully during the months since John had died, and he knew no other career would now satisfy him.

During the past year he had helped his friend and teacher, Will Hasbrouck, in teaching the younger among the pupils at

the Academy. Hasbrouck had given him thirty dollars for this help. He knew one of the neighbors would be glad to lend him a horse for the journey, and went to see him.

"Yes indeedy, Mat, you can have Fanny. Sell her when you've arrived and send me back the money when it's convenient. So you're going to be a Navy man too, eh? Well, you'll get the chance to see this world, if you ain't drowned too soon. You know, I've always felt I'd like to have done some seafaring myself. Seems a bit silly to leave this world without seeing more than a few hundred miles of it. Good luck to you, boy."

Matthew left early the next morning. It was mid-June, 1825. His mother and sisters were in tears, his brothers grinned at him and the youngest remarked that he'd like to go to sea, too, when he was old enough. But his father did not appear. Brother Dick, however, rode a few miles on the way with him. The parting was hard for both.

"I feel you're doing right, Matthew, though I'm pretty nigh sick at the idea of losing you. The Lord alone knows when we'll see each other again. You'll be seeing new people and doing new things, but I'll be right here, missing you day and night."

The two had dismounted, and now clasped each other in a strong embrace.

"This is the worst moment of all, Dick. Leaving you wrenches the very heart out of me. No one ever had such a brother." Unable to continue, he shook his head and mounted. The two gave each other a long look, then Dick, too, swung into his saddle.

"May God watch over you, Matthew."

CHAPTER 3

Matthew Meets a Hero and Begins To See the World

MATTHEW'S FIRST port of call was to be the home of his uncle, Reuben Maury, near Charlottesville. It took a fortnight to make the little journey, but on his third evening, putting up at an inn and still in Tennessee, he fell in with two merchants on their way to Baltimore to purchase goods for their shops. The two men came to like the youngster as they all jogged on together, his courtesy, his cheerful humor and his eagerness for the sea adventure ahead all attracted them. At Fincastle in Virginia they separated, the two merchants heading more to the north, but each of the two, unknown to the other, drew Matthew aside after their last dinner together, offering him the loan of enough money to take him the rest of his way. They had seen the boy's dismay when, on crossing the frontier into Virginia, his Tennessee money had to be changed, losing twenty per cent in the process. This made the remainder of his thirty dollars look pretty small. Such were the hazards of travel in the 1820's.

"I didn't know our Tennessee money wasn't good in Virginia," Matthew admitted. "I don't know how to thank you for offering me this help, but I can just manage, I'm sure." To each he gave the same answer, deeply touched by the kindness of these fellow travelers, and very possibly as the merchants rode on together next day they confided to each other what had occurred, asserting that there was a young man it had been well worth meeting.

"Fine, upstanding, well-mannered lad," they agreed.

And Matthew, riding on alone, thought what good men these strangers were, how kind and generous.

Some days later, with fifty cents remaining in his pocket, having inquired his way when he reached Charlottesville, Matthew dismounted before the plain brick home of his Uncle Reuben, and made himself known. The family was delighted to welcome him, and these were the first of his Virginia kin he had ever met.

He had brought a letter from his mother, and explained that his father had not written, "because he didn't want me to enter the Navy, and would have no word with me after I assured him my mind was made up. I think he felt that perhaps I might be lost to him as brother John is lost."

Naturally there had to be a celebration in Matthew's honor, a dinner to which several friends were invited. They had good food back home in Tennessee, but at Uncle Reuben's table there were dishes Matthew had never tasted before. The chief of these was a curious, cream-colored concoction passed to him in a saucer on a salver by the negro butler. As guest of honor he came first; he looked at the strange but inviting sauce, as he supposed it to be, and carefully took a spoonful which he put on the plate before him.

Mrs. Maury, at whose right he sat, shook her head at him, smiling. "But you are supposed to take it all, Matthew. It's what we call ice cream, and I know you'll like it. Take away his plate and give him a new serving," she directed the butler, "for if he isn't as pleased as the rest of us with it, I'm going to be much mistaken."

Matthew may have been a trifle embarrassed, but after tasting the dessert he smiled at his hostess:

"I'm going to meet with a great many things I've never known

in Tennessee, Aunt, and all I can say is I hope that some, at least, will be as good as ice cream."

Which made them all laugh.

After a brief stay, Reuben having seen to it that he had money for the rest of his journey, absolutely refusing to consider it as a loan — "Good Lord, Matthew, if I can't do a little bit for a relative, and one I'm proud of, the world's in a pretty pass!" — Matthew was on his way again, this time for Fredericksburg, that lovely town so beautifully situated on the Rappahannock River, near which his uncle, Edward Herndon, and his father's sister, Aunt Maury Herndon, had their plantation. Here, too, he was given the heart-warming hospitality of the South, and next day driven over in the family carriage with his aunt to call on Dabney Herndon, to meet his dead brother's wife and his young nephews. It was strange, suddenly, as it were, to find himself an uncle, and he had a happy time. Dabney Herndon wanted him to make a long stay, but Matthew must reach Washington as soon as possible and was taking the stage the following day.

"Can you find me a purchaser for my mare?" Matthew asked. "She's a fine riding horse and in fine condition in spite of the long way we've come. I want to sell her and have the money sent to Mr. Felton, from whom I borrowed her. Can that be managed?"

"I'll attend to it for you, my boy," Dabney answered. "You know I'm head of the Farmers Bank here, and I can see that your friend gets the money safely. Your brother John and I were fast friends, and I hope you and I are to be the same. Your sister-in-law is beloved in this house, and I feel toward you more like a brother than a cousin by marriage. We're going to have a family dinner for you, with all the children at the table, the Herndons and the Maurys, and whenever you come

near Fredericksburg there's always a room for you in my home."

The two shook hands. It was a joy indeed to have his relatives welcome him and make him one of them. Uncle Edward wanted to know all his plans, his aunt to hear everything about his family and life in Tennessee, and then to meet John's widow and find her so happily placed was something his mother and father would be glad to know. Her two boys were splendid youngsters, and he was going to write his father about them. He liked Dabney's children, too, especially his eldest girl, Ann Hull Herndon — Hull being her mother's maiden name — a delightful blue-eyed redhead of twelve, full of laughing spirits and with a voice as sweet as it was merry. She was greatly pleased with this western cousin and asked what cousin by marriage meant.

"Why," Matthew told her, "it means we aren't blood relations, but we're kin because my aunt married your uncle, and so we call each other cousin."

"Oh! Well, I'm glad we can; I think you're a very nice cousin, and I'm sorry you have to go away so soon to be a midshipman. When you get back, will you come to see us again?"

"It won't be my fault if I don't, Ann. I feel so at home with all of you I might have known you all my life — only of course you aren't old enough for that."

"But you could have known me all my life if you hadn't been in Tennessee. Is Tennessee as lovely as Virginia?"

"I reckon I'll have to say one's as lovely as the other, and both are just a little bit nicer than the other."

She laughed, shaking her red curls. A wonderful little girl, thought Matthew.

Next, Washington. It was with real emotion that Maury looked at this city, the capital, the city where Washington had been President and Thomas Jefferson, who had studied under

his ancestor, Rev. James Maury. He stared at the Capitol in awe. If man could build like that, what could he not do?

But he was on his way to the office of the Secretary of the Navy and had no time for sightseeing. That gentleman received him pleasantly, asked what it had cost him to reach Washington and smiled when Maury answered that the sum as far as Charlottesville had been thirty dollars, less what Virginia took from him, but that the rest of the way had been paid for by his relatives. The Secretary told a clerk to figure the number of miles from Franklin to the capital, and to give Mr. Maury fifteen cents for each mile.

"Our regular allowance, Mr. Maury, for travel expenses. Here are your orders. You will join your ship, the *Brandywine,* at New York. She's a frigate and a fine vessel. I can say no better than to wish you will be as good an officer in our Navy as your brother. The *Brandywine* is to take the Marquis de La Fayette back to France, and we have a large number of midshipmen aboard, twenty-six instead of the usual eight or nine, so that all our twenty-four States will be represented, one of the young gentlemen coming from each, with two representing our territories. It's the same with the officers, although we've not been able to represent each State with them, for there are several that have never sent a boy to the Navy. Several of these officers had fathers or grandfathers who fought with La Fayette in the Revolution. It ought to be an interesting experience for you."

"Yes, sir," replied Matthew, his eyes shining. "It's going to be wonderful, sir."

By now it was August. Maury was directed to take the stage for New York and report on board the thirteenth of the month.

It was an interesting trip through beautiful country with overnight stops at pleasant inns and, as Matthew remarked to a fellow traveler, you didn't begin to realize how big the country

was until you began to go about through it. The man, who was on his way to Albany, hardly knew there was such a place as Tennessee.

"I suppose it's pretty dangerous, what with the wild Injuns and the bears and buffalo," he remarked.

Amused, Matthew agreed. Of course, the bear part was true, but somehow he couldn't think of Franklin as being a dangerous place.

As soon as he reached New York, thickly planted beside its harbor, with its high-stooped houses along tree-shaded streets, he made his way to an office down close to the docks where he had been told to report. His papers were looked through, he was told where to go to get his uniform, and an hour later, having been neatly fitted by an expert in the business, he found himself being rowed out with two other middies, both younger than he and even more excited, in one of the *Brandywine's* boats. The very smell of the bay, its saltiness, its bright blue, for the day was cloudless, the harbor with many ships, frigates, schooners, sloops, fishing boats, full of life and movement, enthralled him. On his way from home he had set himself one leading rule: "Make everything bend to my profession." Now he was really at the start.

The coxswain at the rudder remarked casually:

"There's the *Brandywine,* off the port bow."

Following the man's eyes rather than his words — port bow still being abracadabra to him — Matthew gazed at the noble ship, riding at anchor, her sails furled, her three tall masts, square rigged, rising very high, with a long pennant flying from the middle one, the vast tangle of ropes, the guns visible in a long row, which was doubled fore and aft, the grace of her lines, the lightness with which she sat on the water, all thrilled young Maury. He'd heard of frigates, now he saw one, and she seemed

to him one of the most beautiful things he had ever looked upon.

Presently he was climbing a rope ladder, setting foot on deck. A new life had begun for this young man, who had never laid eyes on the sea before, here amid strangers, here as part of a particular profession of which he knew nothing.

I've got a lot to learn, he thought, as he descended deep into the bowels of the frigate where the midshipmen were stowed, and the thought was not terrifying, but inspiring.

A week after Matthew came aboard, the *Brandywine* sailed for Chesapeake Bay, where, at the mouth of the Potomac, La Fayette was due to board her. The week had been used, so far as the midshipmen were concerned, in learning from one of the youngest officers aboard the rudiments of their profession. The names, the uses, the particular actions concerned with sailing were the main job at this time. They were also taught to salute properly, and to climb into the rigging.

"Some time," said the young officer, but not as though he believed it, "you will have to sail a ship as commanding officer. You'll have to know every inch of her, everything in her, all she can do, as well as navigate her. There's a library aboard which I advise you to make use of in your spare time—" he smiled slightly, whether at the notion of spare time, or at the remote possibility of any of his hearers using the library. Maury had already found it and, with that prodigious memory of his and power of application, had learned all there was in regard to the rigging of a frigate. Navigation could come later.

During the sail to Chesapeake Bay one of the younger officers approached him as he sat in the lee of a gun, poring over his book. Matthew sprang up and saluted.

"I've been told you're a brother of John Maury. My name's David Farragut, and I was aboard the *Essex* when we rescued him from the Marquesas, and later saw a good deal of him

when Commodore Porter was chasing pirates in the West Indies waters two years ago. Lieutenant Maury was an officer the Navy could ill spare, and I'm glad to find a brother of his in the Service."

Matthew was greatly moved. John had spoken, during his brief visit home after the *Essex* episode, of this young officer who had commanded a prize with success at the age of twelve in 1813, and was captain of one of the ships of the pirate hunt ten years later. Seeing Farragut standing there before him brought back that brother's loss with a keen thrust.

"Thank you, sir. Yes, John spoke of you — he said you were one of the most remarkable men he'd met in the Navy — boy, as he said, being the elder. I feel it an honor to be on the same ship with you."

Farragut smiled. "I started early, and under Commodore Porter, a wonderful man, who is certainly responsible for whatever aptitude I've shown in a Service I adore. I congratulate you on having entered it and hope this won't be the last time we sail together."

With which he saluted at Maury's salute and was off.

On September 11, 1825, the Marquis de La Fayette stepped aboard, with everyone standing at salute and the guns pealing. At sixty-eight La Fayette still bore himself like a soldier, with a proud lift to his distinguished head. At sight of the company lined up in his honor he smiled a quick, vivid smile, while responding to the salute. Then, as the captain stepped forward and shook hands, he said in excellent English:

"My happiness at boarding your splendid vessel, Captain, for my return to France has one grief, that I shall never see your country again. I was a boy of nineteen when I first came here, forty-nine years ago. It is long ago, but my love for her and

her people is not old. It is young and strong and undying, now as then."

"You will always be a hero to Americans, Monsieur le Marquis, however long the stretch of years, and never will your unselfish devotion to the cause of our liberty be forgotten. But are you tired? Would you like to go to your room?"

"No, I think I should prefer to stay here with you on deck, and watch as we sail down the bay. A glorious sight!" They strolled together back and forth, watching the scenery, chatting. Ahead of them a little rainstorm swept across the bay, and suddenly it turned into a rainbow, arching from shore to shore.

"You see, Monsieur de La Fayette," the captain announced, turning a pretty phrase, "there is the final Arch of Triumph we raise in your honor, and the heavens themselves join us in this last homage."

The *Brandywine* had been named after the Battle of Brandywine Creek, where La Fayette had been wounded, and this was her first cruise. Launched on June 16, her timbers had shrunk through the dry, hot summer, and now, when she reached blue water and the deep ocean swell, she began to leak. At first the captain feared he would have to put back to port, but presently the wooden sides sucked in enough of the sea to swell taut once more, and the leaks ceased. The trip was stormy most of the way, and La Fayette was seasick a large part of the time, keeping to his own cabin. But toward the latter part of the voyage the weather became fine, and he spent more time on deck.

He insisted on meeting each one of the midshipmen who naturally regarded him with awe as a great hero. But his charm soon put them at their ease. Often he would walk back and forth with a middie on either side, listening enraptured to whatever he had to say. He soon discovered that Maury was of French descent, and would chat to him in French. He also

noticed that the boy usually had a book under his arm which he read whenever opportunity offered.

"You like study, Monsieur Maury?"

"I want to learn all I can about navigation, and the ocean and the science of sailing, Monsieur le Marquis. I like reading that teaches you something, that gives you a full return for the time spent. Only there are not very many books on the ship."

The marquis nodded.

"I think you will go far, Monsieur. You have ambition, and you are willing to work; an excellent combination, none better."

Before the ship had left New York the midshipmen aboard had joined to buy a silver urn beautifully engraved with views of the National Capitol, of La Fayette at the tomb of Washington and of the port of Le Havre where the marquis was due to disembark, showing the arrival of the *Brandywine*. The evening before they reached the port the presentation was made most ceremoniously, the midshipman from Virginia making the speech, which he did well and very briefly, asserting it was the mark of their personal admiration for the man whom Washington had delighted to honor. "He loved you like a son, Monsieur le Marquis de La Fayette, and we, who have made this cruise with you, dare to join our affection to the reverence we bear you."

The Frenchman shook each of the group by the hand, wishing them all well in their profession, telling them of the pleasure he had had in their society: "And for this exquisite gift to me, be very sure it will stand in a place of honor in my house, *mes enfants,* if you will permit an old man to call you that."

From Le Havre the *Brandywine* went to Cowes for a recalking. The midshipmen enjoyed shore leave, saw the famous yachting town, wishing it were the right season for the races. The Isle of Wight is a charming introduction to England, and

the early October days happened to be warm and clear. By now, of course, the midshipmen were thoroughly at home with each other, playing tricks and jokes. Matthew was among the older group, most of the boys being younger than he. So they accepted his great addiction to study with less jeering. He had, they thought, funny ways of improving the passing hour aboard. One thing he did was to draw problems in spherical trigonometry on the round shot and arrange the shot in the racks so that he could study them as he walked the deck. There was no teacher aboard, and so no definite plans of study, except in the sea duties of handling the ship and mastering the elements of their profession as prospective officers, which they learned by doing them.

From Cowes the ship sailed for the Mediterranean, joining the squadron under the command of Commodore John Rogers at Gibraltar. The *Brandywine* was given a thorough overhauling there, ready for the start back to America early in the spring. The shore leave was plentiful but strict as to hours, and once the work on the ship was finished she made something of a tour of the Mediterranean ports, so Matthew saw that picturesque and historic coast thoroughly. The letters he wrote back to his people must have been interesting, but none of them survive, worse luck. One item he remembered was buying a Spanish work on navigation which, with a dictionary he found on board, he studied ardently. When his duties took him below he says he used to rush to the book, read a sentence, hunt up any words he did not know, and hurry back to his post on deck revolving in his mind both the new language and the new science.

The world was opening to his interested eyes, and he was, as he intended, bending everything to his profession.

On May 10, 1826, the *Brandywine* sailed into New York Harbor. All the midshipmen were given leaves, and Matthew

wasted no time getting back home. Here, to his deep satisfaction, he found his father entirely reconciled, affectionate, eager to listen to the tale of his adventures. Even though Matthew was no Sindbad, still he had plenty of interesting things to tell. He was a vivid speaker, a fact later proved in many a crowded lecture hall about the country, and his family plied him for every detail he could remember.

He and Dick rode about the farm together, talking, talking. The fields were thriving in the warm late days of spring, the country beautiful.

"I've seen a lot of fine country and fine places, Dick, but I still think Tennessee is the best place in the world. And next, Virginia. I'm so glad you are happy, brother."

For Dick was engaged to a fine young girl and would soon marry.

"Yes, I'm happy, and I can see you are too, Mat. I'd like it better if we were to live near one another, but we won't lose each other wherever we are. I'm glad you and my girl have met. She tells me you're just what I'd led her to expect. I'll have a son, I hope, named after you, before you get back to us from this next cruise."

"That's a promise. I'll bring him something from South America, so see you keep your part of the bargain. Little Matthew! Well, I've not seen my girl yet — they tell me the Spanish American girls are very beautiful and make devoted wives. Would you approve of one as a sister-in-law, Dick?"

But Matthew was mistaken in thinking he had not yet made the acquaintance of the girl he was to marry. Now the two brothers laughed.

"I think you'd better stick to the U.S. in choosing a wife," Dick answered, "though, of course, you won't be asking my advice when the wonderful She turns up."

Before Matthew left for Norfolk to join his new ship, the *Macedonian,* he paid a call on his teachers at the Academy. They were delighted to hear how much he liked a seaman's life. Hasbrouck, the youngest of the three, and perhaps closest to Matthew, was surprised to hear how difficult it was to lay hands on books which would help him study the science of navigation.

"And that's what I want," Maury added, "I think there should be a first-class teacher on the ships carrying midshipmen — but from what I hear if there is a teacher aboard, he usually doesn't teach. The boys have plenty to do, and when they aren't on duty they like to lark, and there's no compulsion in the matter of studying."

"I wish I had some book that might be a help to you, Matthew. But you know our library here, and there's nothing nautical in it, nor Spanish either. Norfolk might have some books for you. There's a little shop run by a man called Ditherington — look it up."

One more stop on his way to his ship was indulged in by the young man. That was in Fredericksburg, to call on the Herndons, as he'd promised. He passed two happy days there, part of them in teasing young Ann, now very proud of having entered her teens.

"You've come into your teens, and I've left mine. Wonderful coincidence, isn't it! You'll be quite a young lady by the time I get back from this cruise. Wish me luck."

"Indeed I do, with all my heart. And I'm a young lady now, Mr. Matthew Fontaine Maury." She tossed her red curls as was her habit and flashed a glance at him.

"You know, Ann, I think that's true," he answered, quite gravely. "But promise not to grow up too fast."

CHAPTER 4

Here and There, All Around the Globe

MAURY HAD been assigned to temporary duty on the *Macedonian,* but his name was still carried on the muster and payroll of the *Brandywine.* She, too, was a large frigate and the steerage, where the midshipmen slept and ate and had their being, was crowded, noisy and rather dark. Not a place for study. Later on, in a collection of articles under the general title of *Scraps from the Lucky Bag,* published in *The Southern Literary Messenger* at various times in 1840, Maury described the opportunities offered for learning the foundations of the science of navigation and whatever belonged with it somewhat humorously. There was a young man from Connecticut aboard the *Brandywine* well qualified to teach navigation, a schoolmaster who wanted to teach: "But not having a schoolroom, or authority to assemble the midshipmen, the cruise passed off without the opportunity of organizing his school." On the *Macedonian* there was a Spanish teacher, and for a week enthusiasm among the middies ran high. Then the business was voted a bore, the teaching being exceedingly dry, and the grammar was thrown overboard amid cheers, while we "declared in favor of the Byronical method —

> *"'Tis pleasant to be taught in a strange tongue*
> *By female lips and eyes."*

So the young gentlemen deferred further studies until they should reach "the South American vale of paradise, called Valparaiso."

This was all very well as concerned the other boys, or young men, but Matthew already knew Spanish by way of his dictionary and that old work on navigation, and very likely improved what opportunities came for talking with the Spaniard in his own tongue. Not that he had any objection to being taught by way of female lips and eyes. He was an excellent dancer, loved singing, and he liked a pretty girl as well as the next fellow. But all that had nothing to do with study, and he was aboard ship to learn the theory as well as practice of navigation.

The *Macedonian* sailed for Rio de Janeiro on June 10 of this year of 1826, taking sixty-two days to make the journey. At the time Brazil and Argentina were warring over Uruguay, each insisting it was under its dominion, while poor little Uruguay was heartily wishing a plague on both their houses. Brazil had had the upper hand until 1825, when Uruguay started to get the tyrant out, assisted by Argentina. The American ships came down to see that their own citizens were not harmed in the row. After cruising about off Rio, just to let the Brazilians see they were on the alert, they sailed on down to Montevideo, Uruguay, and here the *Brandywine,* together with the sloop-of-war *Vincennes,* caught up with them. Maury returned to his old ship, and found some of his old companions aboard. In spite of the disturbed state of the country there was some shore leave, parties, dancing. Fighting had never yet put an end to gaiety in Latin lands.

Over on the west coast of South America fighting was also going on. Here that great patriot, Bolivar, was doing his best to unite the various and often-quarreling States of Columbia, Peru, Bolivia, Venezuela and Chili, after having freed them, and ended forever the domination of Spain in the New World, in 1824. He wanted to make one great Union of these separate

entities, but he was to fail. Jealousy, self-seeking, inability to take the grand view would end that marvelous plan. But in the early part of 1827, when the great Liberator had conquered his chief opponent, Paez, and granted him an amnesty and his friendship, all looked promising. Meanwhile the *Brandywine, Macedonian* and *Vincennes* sailed round the Horn and up the western coast as far as Guayaquil, Ecuador. From then on, they moved up and down the coast, keeping an eye on American merchant shipping, and at Callao, Peru, on March 10, 1827, Maury was transferred to the sloop, *Vincennes,* which was scheduled, when and if the turmoil between the different countries ended, to circumnavigate the globe.

This transfer suited Matthew perfectly. The ship was small and he was the only midshipman on board after William Irving, a nephew of Washington Irving's, was transferred to another ship in 1829. Irving had a fine little library, of which Maury made utmost use while he had the opportunity. Once his ship duties were attended to, his interludes of chat with the personnel of the ship, and the parties ashore, to which everyone went, were over, there was much peaceful time to read. Already he was at home in both Spanish and Portuguese. He had made up his mind that, when he returned to the United States, he would be ready to take the examinations which would make him a "passed midshipman" (probably equaling today's ensign in rank) and bring in more than the nineteen dollars a month he earned aboard the *Brandywine* during his first cruise. Since that first cruise his pay had been slightly raised. Pay was small in those times, and a man could be ranked as a midshipman for years after he had commanded ships, acted as first officer, taken all the work and responsibilities which went with these posts. To be sure, while these various positions were held, the salary rose proportionately, but it was a curious situation. "Passed

midshipman," however, made you an officer, and no longer one of the young gentlemen in the steerage.

In addition to his study Maury also had the advantage of a closer association with the officers aboard the sloop and others, during the two years in South American waters, which was of infinite value. These men had seen much of the world and met many men of high standing in various countries. There was a value, too, needless to emphasize, in his contacts with foreigners. Life broadened and grew richer. And Maury had learned not only how to obey orders, but how to give them, a more difficult matter.

In 1829 conflicts along the coast of the Bolivar States having quieted, the *Vincennes* set off, under Captain William C. Finch — the first American warship to undertake the circumnavigation of the earth. The first stop was to be the island of Nukahiva, whose name meant much to Matthew. The particular reason for the visit was to let the natives know that they had better treat American sailors well or there might be serious consequences. This was to be impressed with the most warm-hearted friendliness but, nevertheless, guns would show as well as smiles. The Marquesas were important as refueling stations, and for fresh fruits and water.

Also, Captain Finch was expected to show the admiring natives how high in moral values were the natives of America, so that they might copy this excellence. The best way he could think of doing this was to keep his men from going ashore except under surveillance, and forbidding the natives to come aboard. This did not, however, apply to the officers, and Maury was a frequent visitor with the chaplain, the Reverend C. S. Stewart, as companion. Altogether the *Vincennes* lay in port three weeks, during which time Matthew became quite fluent in the language, carrying on conversations with the old king,

his brother's friend. The war between the two tribes, the Happas, friendly, the Typees, enemy, was as usual flickering about. Just before the *Vincennes* was due to leave three Happa children were captured and carried off. Captain Finch ordered a company of his men, under Maury, to pursue the Typees and get the children back. Unluckily one of the poor little fellows had been eaten, but the other two were rescued and the Typees given something of a licking. When they came back the men were given liberty ashore, but the old king was taken aboard as hostage — "for," says Matthew, writing to a friend, "his subjects were all a set of savages and the women literally in the fig leaf state. At night, when all the men had come off safe and sound . . . I was sent to take the old fellow ashore. Going ashore I made myself known to him. He was the firm and fast friend of my brother. Had saved his life. He was then old. He . . . offered me his sceptre, his own wife, and the daughter of a neighboring chief if I would remain. . ."

But Maury had plans that did not include being king of a cannibal isle, so he thanked the old man and said good-bye. The *Vincennes* set sail.

But she came near not getting far. The breeze was light, the ship drifting gently before it, when suddenly she was carried forward by a great ground swell straight for the line of breakers marking a dangerous reef. Some of the men cried out in sudden alarm as they realized the sloop would not respond to the rudder. Then, at catastrophe's point, a sudden wind filled the topsail and she responded to the helmsman, skimming lightly past the foaming peril.

"Bless her," said the bo'swain who stood beside Matthew. "Ain't she the fine little lady!"

With a deep sigh of relief Matthew nodded his head:

"If we hadn't been drowned, we'd have been in the same

situation as my brother, who spent close to two years on this island."

Five days later the *Vincennes* dropped anchor at Tahiti, in the Society Islands. There were interesting shore parties, feasting on strange foods. The island's ruler, Queen Aimata, was most hospitable, but when Captain Finch invited her to a dinner aboard the *Vincennes* in return, the salute fired in her honor frightened her so badly that she had hysterics. The captain and young Maury together finally quieted her and she was taken over the ship, showed the guns and how they were worked, and finally served an excellent meal with good French wine to cheer her.

"Women are much the same the world over, when you come to think of it," Finch remarked to Matthew, as they watched the queen being paddled back in the royal canoe at sunset. "You try to please them, and find you're doing the wrong thing. Stay away from them, my boy."

Hawaii came next, and again Maury went sightseeing with the chaplain, visiting the volcano and the Cascade of the Rainbow which the reverend gentleman, having timed their visit to get the best effect, went quite wild over. He conceded that it was as beautiful as anything on Nukahiva where, when the two visited the Valley of Taioa, he was roused to ecstasy, writing of it that it was "almost a fairyland, scarce less fascinating in its features than the imaginary haunts pictured by the pens of genius as the abode of Calypso, or the happy valley of the Abyssinian prince."

Honolulu came next, with ceremonious exchanges between King Kamahameha III and the sloop's officers. The captain presented His Majesty with a map of the United States and a pair of gloves. The king was too young to reign, so the regent was honored with the gift of a silver vase suitably inscribed

while the princess received two silver goblets. In addition the captain delivered the letter for the king from the Secretary of the Navy. There was some talk, too. A matter of claims for about fifty thousand dollars by American citizens was amicably settled, the king also giving his word that all visiting or wrecked sailors should be treated with kindness.

The chaplain and Maury agreed that the Hawaiians were a particularly fine-looking race, with charming manners. They had long been accustomed to white men, they had a graciousness and a cheerfulness pleasant to find. They weren't cannibals either.

"That in itself shows a higher status than most of the South Sea Island races, Mr. Maury, who, in spite of considerable contact with civilized men, appear to cling to that tragic custom. I'm still haunted by the thought of that poor child you failed to rescue on Nukahiva." Mr. Stewart's face contracted pathetically. "Yet the natives there whom we came to know seemed admirable to me in so many ways."

"It's a queer world and full of strange people, Mr. Stewart, no mistake about it. The more one sees, the more one wonders."

The next stop, January 3, 1830, was China, the *Vincennes* having been preceded by only one other American warship into these waters, the *Congress,* which had made the voyage in 1819. Here the officers were asked to dine with the American consul and his family. Several merchants, who had long made China their home, were also guests and it was almost more surprising to be talking and eating with home folk than with cannibal chiefs. The Americans were glad to see one of their own warships, and the Consul was emphatic in assuring Captain Finch that more of the same would be highly advisable.

Off again, with first a brief stop at Manila, where, more than a century later, a grim tale of Yankee heroism and endurance

would be written, and so homeward, by way of Sunda Straits and Cape Town. Next, and here a stay of some days was made, they stopped at the Island of St. Helena. Napoleon had died nine years earlier, and his body was still lying in the lonely little glade near a spring, shaded by two weeping willows. A stone marked the grave with the two words, *Here Lies,* but no name, engraved upon it.

"What did all his great conquests, his magnificent victories avail him in the end, or his country either, Matthew?" remarked Mr. Stewart, as the two stared at the stone. "Let us hope his career will serve as a lesson to others who may be tempted to emulate him and set up as conquerors over their fellowmen. It is the one service his life can yield to mankind."

"There is more than one kind of cannibalism, Mr. Stewart, it seems to me. A man like this who, to satisfy his ambition, caused the death of unnumbered of his kind and the misery of countless more, is a species of cannibal. Or so it appears to me."

"Well, he's gone to his reward, whatever that may be," the chaplain answered. "He paid bitterly at the end," he continued musingly, as they strolled on to see the house, *Longwood,* where Napoleon had lived. A long, low L-shaped stucco house, with many windows and a gabled roof, it looked friendly and pleasant.

"I saw his birthplace at Ajaccio, in Corsica, on my first cruise," Matthew remarked. "It is a white stucco building, too, four stories high. Not so charming as all this, and in a narrow street, and his parents had only a floor. They told me at the governor's, when I went for our permits, that he was only fifty-two when he died. Think of that!"

This was their last stop until they arrived at New York with the ship's little band playing *Hail Columbia,* everyone smart in

their uniforms, men on other ships and boats in the harbor crowding each other to see them sailing in. June 8, 1830. Four years less two days since Maury had left Norfolk in the *Macedonian,* six years next month since he had stepped aboard the *Brandywine* for his first view of a ship and the sea. It seemed more like a lifetime.

Almost the whole of that long period he had been at sea.

Most of the officers of the *Vincennes* were given long shore leaves, Matthew being allowed several months. He had the satisfaction of being offered the position of master on a merchant ship as soon as he was paid off, but what he wanted to do was to prepare himself for his examination so he declined. Washington was the best place for his purpose, and there he went.

He did not think merely of passing the examination; he studied not only navigation, but Euclid, not just how to take observations, but the scientific rules and reasons behind them. The study fascinated him, the science of navigation more than the technical details, although he had had plenty of practice in these on his cruises. But this was an age of development. Steam was already on the way. Many new ideas were in the air. He felt the excitement of them.

But study was not the only thing that made the autumn and winter of 1830–31 exciting for Matthew. The red-haired little girl, Ann Herndon, was visiting relatives in Georgetown, across the Potomac. He lost no time in going to see her. The child he had known, and half expected, perhaps, to find again was gone. Ann, nearing her eighteenth birthday, was a lovely young woman and, without an instant's hesitation, Matthew fell in love with her. She swept from his memory some of the dark-eyed señoritas with whom he had flirted in South America, the fair English girls he had found charming. Never till now,

however, had he felt true love, the immense desire to make this woman his wife, to have her at his side for all the years of his life.

Before the winter was over they were engaged. Maury went to Fredericksburg to ask her hand of Dabney Herndon.

"I could not wish for a son-in-law closer to my heart than you, Matthew. Indeed, I have secretly hoped that this would happen. Even though you and Ann must wait a while before marrying, what does that matter? You will go far in your profession, and I think you are well suited to each other. You have both my consent and my blessing."

In the examination Matthew passed number twenty-seven in a class of forty.

CHAPTER 5

His Third — and Last — Cruise

TWENTY-SEVEN in a class of forty was no great shakes, but there was a reason for this. The subjects covered in the examination were Nathaniel Bowditch's *Practical Navigation*; Playfair's *Euclid,* Books 1, 2, 3, 4, and 6; McClure's *Spherics*; mental and moral philosophy; algebra; Spanish or French and seamanship. This last was the catch. The elderly officers who conducted the examination cared little for the scientific and mathematical items. They liked to hear a word for word quotation from Bowditch. They knew that, and they did not know higher mathematics. Their questions, lasting from fifty minutes to two hours for each midshipman, were largely confined to the practical handling of a ship. In one of the *Scraps from the Lucky Bag,* ten years later, Maury described how these examinations were conducted. No applicant who was concerned with the scientific branches did more, it seems, than irritate the examining officer. Your job was to be able to rattle off by heart the first or second of Bowditch's formulas for finding the longitude at sea by a lunar observation. There was no necessity for understanding them. And the middy who walked up to the blackboard and demonstrated upon it the problems of navigation was certain to receive a lower grade than the chap who had learned his piece word for word. The old gentlemen sat about, asking any questions that came into their heads, and, as they had entered the service as small boys and never had opportunity to study the academic problems that were beginning to rise in im-

portance and would soon become an absorbing part of a Navy man's training, they stuck pretty well to questions of seamanship. Matthew was good enough on the practical side to get his promotion, however, which was all that was required.

Before being assigned to a new ship, some spare time remained, during which Matthew tried to get a State appointment as surveyor. With the salary this would give him he could afford to marry and naturally that was an important consideration. He could not get it and realized that, as he put it in a letter to his brother Dick, "Uncle Sam will have the selling of my bones to the doctors." He was evidently feeling low in his mind.

There was some satisfaction when orders came for him to take the sloop-of-war *Falmouth* as her sailing master. This meant being captain, with the rank and the pay of a first lieutenant, a higher salary than he had hoped for. He was to sail in June, 1831, from New York. South America was to be the first objective, and then on around the world again, a four-year cruise altogether.

Before he sailed the young officer tried to get data on the winds and currents to be expected, and what course promised the most speed. But there was nothing definite to be found. There should be, he thought, now that ships were so constantly doubling Cape Horn, and decided to keep a careful record of what he found that might help in speeding traffic. It was the first glimmer of his life work.

Then came the wrench of saying good-bye to Ann, Nannie, as he called her.

Before they parted he gave her a seal he had had made, engraved with the word *Mizpah,* that Biblical salutation which stands for *The Lord watch between me and thee, when we are absent one from the other.*

"Seal the letters you write me with this, my Nannie, and only those to me."

Unable to speak, she nodded her head. They clung together for a moment, then he pushed her gently from him and was gone.

Off once more for Rio where the ship remained for some time. The city was very gay, and the American officers welcome at the dinners and dances, the picnics and excursions. It was winter in that hemisphere, but the weather was fine, bracing and though some rain fell, it did not exceed a few sharp showers. Matthew could get along in Portuguese almost as well as in Spanish which greatly assisted his social success, as did his dancing. There is no harbor on earth that is more dramatic, and few cities that have a better climate. A cosmopolitan city even then, knowing and enjoying the amenities of life.

Around Cape Horn again, and this time Maury began the study of an odd phenomenon, the famous "low barometer" off the Horn. He wrote his first scientific paper on the subject, publishing it in the American *Journal of Science* soon after his return to the United States in the early part of 1834, under the title *On the Navigation of Cape Horn,* which gives a lively picture of the perils of that dreaded passage, as well as the most careful details regarding the winds and the vagaries of the barometer. This was not the only article by him to appear in the same publication. He had invented an instrument for *Finding the True Lunar Distance,* and he described the plan of this instrument in a brief paper. In fact, Matthew had entered a writing field in which he was to do a great work. Having his own cabin on the *Falmouth* he could devote time not occupied in ship duties to writing. He made a good start with a work on navigation, to be finished later on shore. This was the first sci-

entific book on navigation ever to be written by an American officer and he hoped it would help his promotion if it turned out well. All this was in the future.

At Valparaiso the *Falmouth,* arriving in October, remained for almost a year, and here Maury met again the friends and acquaintances of his earlier visit. He was a man who enjoyed people, liked good talk, and was thoroughly at home by now in Latin-American society. Next they cruised on up the coast, making another long halt at Callao, the port for Lima, where there were other old acquaintances. From here, in April, 1833, he wrote brother Dick who appears to have been in some financial difficulty:

"Four years married and three children already! Why, that is as many as I want altogether. However, *I* may have none. In that case we will call yours, ours. I cannot say when I shall be married; that depends upon my promotion, and God knows whether I am to look for that this year, or the next, or the next. . . I am sorry to hear you have had such ill luck with your crops. I hope you will make up this year for all lost time and be able to place yourself square with the world. But can't you farmers make more than $300 per year? That seems monstrous little. I have given the fourth auditor directions to pay you the sum of $300 — a claim I have had standing with the department for some years; your letter reminded me of it. This little sum I want you to speculate with; if you make anything from it we will share the net profits; if you lose it the loss is mine and we will say nothing about it. I suppose even ten or fifteen dollars off it a year would be some little help to you? If you do not get more . . . appropriate the whole profits, my good fellow, to your own purposes. You need not be scrupulous about it, for it is lying idle in the department, and would continue there doing nothing until I should call for it after I get to the U.S."

This was by no means all the money Matthew gave his family. He helped them often, as generously as he could.

He added a paragraph about the youngest brother, Charles. Charles had refused Matthew's offer to get him a commission to West Point and evidently resented his brother's failure to have him made a midshipman. He had become assistant to a carpenter and housebuilder, and was doing well in that work.

"I like what you say of Charles. I hope he will make a useful man of business; I wish he was not so unsociable as he appeared to be when I saw him last; say something affectionate and encouraging to him from me."

In August of this same year, 1833, Maury was transferred for a few weeks to the schooner *Dolphin* when the *Falmouth* proceeded on her way to China. Then, when the frigate *Potomac* arrived at Callao, under Captain John Downs, on her way home after a long cruise, he joined that ship as first lieutenant, a post he had held on the *Dolphin.* Stopping at Valparaiso on the way to the Horn, Matthew was startled by the arrival on board of an excited young Chilean army officer. He wanted a private talk and was taken into Maury's cabin. There, somewhat heatedly, he confessed that he had asked the hand of Señorita Manuela Poma, with whom he was very much in love, the preceding evening.

"Señor, she gives me to understand that her heart belongs to you, and it is clear that she expects to marry with you. Yet I hear that this ship sails for your country tomorrow morning and you go with her. What does this mean?"

Poor Matthew was horrified. He had met and liked the young lady, they had danced together on several occasions, conversed and he had, as was the accustomed Spanish manner, paid her compliments. Nothing whatever of an amorous nature, however, had ever passed between them. He explained as well

as he could to the officer, even telling him he was affianced to a young lady at home to whom his heart was wholly given.

"I will write to Señorita Manuela and explain all this to her. I think it is only a romantic fancy — I have noted no trace . . ."

Good heavens, he thought to himself, what a fool I must sound. What can I say that doesn't make me seem fatuous or an attempted Don Juan? The Chilean left, to his great relief, muttering that sometimes mistakes arose, that perhaps if the señor explained. . . It was a miserable business, and Matthew gave a gusty sigh of relief when his visitor left the ship. When he reached Rio, the first place from which he was able to mail a letter, he posted a long one to the girl. He had no answering word from her, nor expected one. But not very long after he had returned to Boston, where the *Potomac's* cruise ended and everyone was paid off, he ran into an officer friend of his who had just arrived, and who told him the young lady had died of consumption — she had probably been ill at the time Maury had known her.

The *Potomac* had had a terrific dodging contest with icebergs off the Falkland Islands, but got by safely. That was about all marking the return voyage home. It was the spring of 1834. "Home was the sailor, home from sea." Three more years had slipped away. Not again would he sail the seven seas, little as he dreamed of this change in his fortunes.

He was given leave of absence, and on July 15 was married to Ann Herndon in the Episcopal church in Fredericksburg. The wedding was simple, the bride exquisite in her white gown and flowing veil, the reception after the ceremony at the Herndon house a joyous affair. Dabney had given his daughter away, and he raised his glass high, charged with champagne, to toast the young couple.

"I do not know how other fathers feel at the marriage of their

eldest daughter, but I can speak for myself. I have gained a son-in-law whom I have long loved as a son."

Matthew had handed the minister, the Reverend E. C. McGuire, twenty dollars at the end of the ceremony. It was the last ready money he had. But there was back pay coming to him, years of it as a first lieutenant. He rented a charming two-storey frame dwelling, with an old-fashioned garden full of old-fashioned flowers and plenty of room. In this house he was to spend the next seven years of his life.

While still commanding the *Falmouth* he had done some work of a special sort, assisted by one of the young officers under him, W. B. Whiting, making a survey of San Lorenzo Island, off the coast from Callao. Later Whiting confided to his messmates that one day Maury would certainly make his mark. They laughed. "That quiet chap!" One of them added, "Why, he spends his leisure in reading and writing. I've never yet heard that they make you an admiral for flourishing a pen."

Whiting laughed with the rest, but insisted:

"I'm not talking about his writing, but about the man himself. He's the sort that when he's after something, nothing stops him. I can tell you that when he was surveying the Boca del Diables — and it's well named — on that island, San Lorenzo he scrambled up rocks and crept around corners where I was almost too scared to follow. He'd remark cheerfully that it was hard going — and then go! When he was taking some of his observations he looked to me as though a sneeze would topple him to his death. And that wasn't all. When we finished with San Lorenzo he decided to land on the Labos Rocks, a bit farther westward, and make some extra astronomical and trigonometrical notes. He left me in the boat that time, for which I was thankful a little later. It was calm when we landed him, but before he finished the wind blew up hard from the south,

the tide was rising, and that dear old Pacific on the rampage. We couldn't take the boat very close to shore because one moment the water would rush up against the rocks with incredible force, then the next moment draw back with a regular howl, leaving a great gulf twenty to thirty feet deep. Maury yelled to me to come as near as I dared, having climbed to the highest point of the rock that dropped almost sheer down. There he calmly took off his jacket, pulling twine out of his pocket, carefully wrapped and tied his watch and sextant in it and, at just the right instant, pitched the wad at the boat, a bowman standing ready with his boathook to yank it out before the water could soak through. He got it safely. Then Maury, coolly waiting for the next oncoming wave to reach its peak, jumped into it and swam with all his strength — he's a good swimmer — straight for us. I can tell you it was something to see. When we dragged him aboard he had a cheerful grin on his face. He'd got what he was after which was all that mattered. I don't suppose it even occurred to him, when it began to blow up, to call us to take him off. He hadn't finished yet, so of course, he stayed."

Having spent almost the whole of nine years in sea duty, Maury was entitled to a spell ashore. He was thankful for the prospect. Not only his wife, his own home made for this content, but also the fact that he could settle quietly to the writing of his book on navigation. He had had a lot of experience, and in this last cruise had discovered a great deal that he wanted to put into writing for the use of other navigators, information not to be found anywhere else. If this book had the success he hoped for it, and was received by Navy men with interest, he meant to use it as a base for claiming to be made a lieutenant of ten years' standing, with the back pay due for those years. So to work.

The first period of his life as a Navy man had ended. Unconsciously he was setting the base for the next phase. It would have its troubles, its bitter disappointments, it would meet with jealousy and injustice. It would also make him one of the great men of his profession, famous throughout the civilized world, honored by emperors and scientists. Throughout his life the traits noted by Whiting dominated his character and his career. What he set out to do, he did. His reason for doing a thing was that it needed doing. He did not care particularly for the personal rewards which might come to him; indeed, much of his time was given where there was little chance of "making anything" out of it. That was not his aim. He must be able to bring up his family decently and meet his always simple, financial obligations. He was a genius; not only because he had the power to work hard; but because he could see what other men did not see, could use to reach his ends what others neglected. The physical world was a tool to him, a tool whose availability to help man in his various labors was tremendous, if you but took the trouble to study and understand it.

This trouble was to Matthew a fascination, an endless delight. The more he studied the laws of nature the more they fell into a pattern, a glorious pattern, each part fitting into the other: wind, water, earth, climate, the depths of the ocean, rain and sunshine, the skies themselves obeyed laws you had only to study and understand to make them your servants, not blind forces beyond control. The subject was too vast for one man, of course. But you could pick your portion, and clarify that.

CHAPTER 6

He Publishes a Book and Breaks a Leg

MAURY HOPED a good deal from his book which he finished before the end of September, 1835. Nothing like it existed, and he knew how much it was needed. The firm of E. C. & J. Biddle, of Philadelphia, was to publish it, and Maury was anxious to have it out before Congress convened.

As he wrote his brother Dick from Philadelphia, where he had gone to hurry along the printing, he had a good reason for this urge. If the book came out, if it met success, while he was still awaiting his promotion, due the coming spring, there would be twice as good a chance that the claims he intended to present to the President and the Secretary of the Navy would be granted. During this year Maury completed ten years' service in the Navy, yet he was still only a midshipman, although he had been in command of a ship in addition to having acted as first lieutenant for years. Strange were the ways of promotion in the 1830's! This fact, among much else, was to rouse Maury's lively comment, with forthright suggestions for improvement, somewhat later on in his life when he began to publish his series of papers called *Scraps from the Lucky Bag*.

The claims to be presented were for no less than the back pay of a lieutenant of ten years' standing, aggregating close upon five thousand dollars. The book, supposing it to have the value Maury felt it had, would be worth a good deal to the Navy. Moreover, he had to stand some expense in publishing it, risking sums he could ill afford. Also, it was an established custom

in the Service to grant back pay for higher rank in recognition of merit so that Maury was not starting a precedent.

The book, to which its author gave the title *A New Theoretical and Practical Treatise on Navigation,* was brought out early in January, 1836. Its success was instant, and kept growing. Maury himself had not dared hope for such a welcome. Men to whom copies had been sent — high-ranking officers, professors in colleges — sent in letters that made a commanding series of excellent comment, which the publishers proudly printed. These letters were swiftly followed by highly favorable reviews in newspapers and other publications. No such book had ever, either in America or abroad, been written by a naval officer, and only a naval officer could write it out of personal experience as well as deep and careful study. Surely this was a feather in the Navy's cap.

The praise which gave Maury the greatest pleasure was from Nathaniel Bowditch. Although it would put his own book out of the running, he recommended it, with carefully considered words, as the text book for junior officers. The time had come for science, theory, to be taught as soundly as practice, and in this new book the student could study the whole field — know not only what to do, but why.

In a short time the Maury book was, in fact, adopted in place of Bowditch's. Moreover, nine years later, when George Bancroft, the historian, was Secretary of the Navy under President Polk, and founded the Naval School at Annapolis, reorganized five years later as the United States Naval Academy, the same work continued to be used for a number of years.

But all this carried no weight with the then Secretary of the Navy, a cheap politician who hated the President, and who, as soon as Polk approved of Maury's claim, was but too eager to oppose it. This man, Mahlon Dickerson, was one of the griefs

the Navy has had to suffer, as he would prove once more in the following year.

Meanwhile Matthew had become a noted figure in Fredericksburg, one result being that he was asked to give a series of lectures on scientific themes which proved extremely popular and were the forerunners of many such engagements. Another was an invitation from the Superintendent of the United States Gold Mine, not many miles from the city, to spend the summer there, a house for himself and family being included, besides a small salary, for which he was to reorganize the management of the mine and make any suggestions he thought fit. This was agreeable, as the mine lay in pleasant country and would be a change from the hotter weather of July and August in Fredericksburg.

June of 1836 had finally brought him the promotion (due since March) to a lieutenancy, so that, even with the disappointment of the secretary's refusal to consider his claims, it was a happy summer. The more especially so since the first child, christened Elizabeth Herndon, had been born that May, a fine, pretty, laughing little creature to whom her father became instantly devoted.

With the coming of September the Maurys moved back to their Fredericksburg home. He had been asked to remain as manager of the mine at a salary of $1200 a year, but did not feel he could accept. This salary was to be merely a starter, but Matthew felt he did not want to tie himself down to a job of that kind. There was not scope enough in the work. If he did resign from the Navy he wanted, if possible, a government job which would give scope to an inner longing to do something that needed doing, that would be of use to man, particularly to men of the sea. Indeed, twice, three years later, in February and in August of 1839, he wrote to F. R. Hassler, chief

of the United States Coast Survey, applying for service as head of a triangulation party. Hassler in the end made other plans and the matter fell through. Matthew would have been glad to secure a position out of the Navy, but it must be a position that would give him the right to take it, must use his capacities to the full. He had one or two disappointments of that kind, for fate, although he didn't know it, was really with him.

Now he once again applied for sea duty. He had an interesting assignment given him in return (one of the results his book brought) of astronomer and hydrographer to an expedition that had been slowly forming since May and was expected to sail late in the fall. An added delight was that Captain Thomas Ap Catesby Jones had been put in command of the little fleet, consisting of Maury's old ship, the *Macedonian,* with two brigs, the *Pioneer* and the *Consort,* the captain being a man Maury held in high esteem and personally liked immensely. The expedition was to make a thorough exploration of the South Seas, a type of duty appealing to Matthew. He would have splendid opportunity for the kind of observation and study that was particularly attractive to him and which would, he believed, be of real service to every man who sailed the seas. While the ships lay in Norfolk Harbor he visited them several times, held some good talks with Captain Jones, told him some of his ideas as to the mapping of currents, both wind and water.

Some time in October the little fleet was ordered to New York Harbor but, as there was no work for an astronomer and hydrographer until she began her cruise, Maury remained at home, putting in his time studying the new duties he was to undertake. The winter moved on, but the ships received no orders to sail. In fact, Secretary Dickerson was up to his tricks again. The President, he told his friends and Polk's opponents, was simply trying to glorify himself by fathering an expedition for which

there was no need, but over which he could splurge. He saw to it that one delay should follow another. It was not until March 1837 that Maury received orders to join his ship. Even then nothing happened, and the year dragged along with the expedition lying at anchor. Captain Jones' fiery Welsh blood had been at the boiling point so long that, late in the winter, he fell ill; upon which Dickerson promptly relieved him of the command. In his place he appointed a junior lieutenant, Charles Wilkes, who had spent most of his career in the Navy ashore and in Washington, playing politics, and who was utterly unfitted for an expedition like this one. To be sure the Secretary, whose reputation by now was thoroughly discredited, had received refusals from such men as Perry, Shubrick, Kearny, Gregory. Nevertheless there were scores of men whose fitness for such a command was infinitely above that of Wilkes who had had so little ship duty that he hardly knew, as Maury said of him, the "common routine of duty aboard a man-of-war."

Utterly disgusted, and enraged at the treatment Captain Jones had been given, Maury asked, in April, 1838, to be relieved from the expedition, announcing further that he would not consent to serve under Mr. Wilkes. Any other man, yes, but not him.

By now the affair had aroused such an uproar that it was taken out of the hands of Dickerson and given to Secretary of War Poinsett. This man sent for Maury, received him with open arms and, in the interview that followed, asked what officers he would recommend, (as Matthew wrote in a letter to a friend some years later) "*without regard to rank* that *I* thought best qualified for the command. I afterwards had reason to suppose that he expected me to name myself and intended to put me in command of it, as really I was the most important personage in it — Hydrographer and Astronomer. But I asked myself, what right have I to draw distinctions among brother officers? So I

gave him a list of the officers belonging to the expedition; myself, the youngest lieutenant in the navy, at the bottom of the list. He froze up in disgust . . . and gave Wilkes the command, and so I was the gainer, for I preserved mine integrity."

Doubtless there was somewhat more temper at the moment than appears in this brief account written after the lapse of time and events. He probably wanted to forget the whole South Sea business. On the same day he resigned from it Maury applied afresh for sea duty; he had now been ashore since the spring of 1834, through no fault of his own, certainly, but he was anxious to get back to active duty. In May, 1838, on the same day of the month as Elizabeth was born, another daughter, given the lovely names of Diana Fontaine, had come to the Maurys. As he told his wife, the miserable shilly-shallying of Dickerson over the expedition had at least given him the joy of seeing his second little girl and of learning how to play with the first, with Betty, who was now trotting about, beginning to talk very well and finding in her father a marvelous playmate.

Orders came for the new assignment. Maury was to join in a survey of Southern harbors to the end of finding the best place for establishing a navy yard. Senior Lieutenant James Glynn was in command, but Maury would be captain of one of the two ships, the schooner *Experiment,* the steamer *Engineer.* He would be away about a year.

When, in August, he said good-bye to his home and family he took along with him two tiny shoes. One was a crumpled little kid affair partly worn out by the active Betty, the other a knitted one which he took off baby Nannie's foot.

"Every time I look at them hanging up in my cabin, you'll all come back to me as I see you now, Nannie," he told his wife. "I'm going to miss you — miss you horribly! Why, think, when I get home to you again, both these babies will have out-

grown these small shoes, Betty won't know me, I'll hardly know her. This having a wife and daughters, and I mustn't grumble at it, has an awful drawback. I have to leave you every time I go to sea. To leave you, and long for you, and wonder how you are, the three of you, and pray God all is well with you."

It was slightly over a year before Matthew returned, almost at the end of August, 1839. The work had been interesting. Interesting, too, to command the steamship, Lieutenant Glynn preferring the schooner. Slow, careful work it was, leading them first to the harbors of Beaufort and Wilmington in North Carolina, next to the inlets of Sapelo and Doboy, along the coast of Georgia. No such careful observation of these ports had been made until now. Lieutenant Glynn explained that no definite conclusions were to be reached as to a navy yard; their job was to report, to give their opinions as to the merits of this or that locality, with every detail possible. Although they were to return to Norfolk at the end of the year's work, there would be a second survey to follow, probably using up another twelve months.

Home again, with a month's leave. Time to get acquainted with a new Betty and a very different Nannie from the small tot of a year ago. A tousle of blonde curls brought her another nickname — Curly.

"Now I won't keep mixing the two of you up," laughed the sailor, home from the sea, gazing at Nannie, his wife. How lovely she was! He'd forgotten quite how lovely; indeed, it was hard to believe it even now. He told her so, and laughed again when she blushed.

"Little Nannie, or Curly, as you like, Matthew, but she looks like you. See how long her eyes are, and just as blue as your own. If you're being complimentary, I don't see why I shouldn't. But — " she looked away, out of the window, into

the deep summer green of the garden, and Matthew saw the glint of tears in her eyes.

"What is it, my dear one?" he asked gently, drawing her close.

"I'm a sailor's wife, and I don't want to be anything else, Matthew, but you'll be off for another year — just forgive me — "

He had that day sent off his second letter to Hassler in regard to the Coast Survey Triangulation party. Perhaps these long absences would no longer be necessary; but he would not speak of this until it was settled one way or the other. He held her tightly to him.

News came from Lieutenant Glynn that the sailing on the new piece of duty had been postponed. The brig *Consort* was now being overhauled and would be used instead of the steamship. "You'll command her, and she won't be ready before October, we can't say just when yet. Orders will go to you, and in the meantime all our leaves are extended."

That was good news, especially as Matthew intended to go to Tennessee. He wanted to make arrangements for his parents to come to live with him in Fredericksburg. They were growing old, and the task of keeping the farm going was getting beyond his father. They had already consented to come, but no time had been set. If Matthew went there everything could be properly planned, and he even hoped he could bring them back with him. Diana sent along an urgent letter, begging the two to come, telling them all was ready for them, and that they would love the children.

Meanwhile Hassler had turned down the Coast Survey position. Maury was very much disappointed, for the prospects of another year drifting about the harbors of the South was not enticing. In spite of his book, which had by now roused enthusiasm abroad, especially in Britain and France, he did not seem to be in line for any cruise or other navy work offering the op-

portunities he secretly longed for. He was a junior lieutenant, he would probably remain one indefinitely, he had lost the extra thousand dollars pay a year which had been given him while the South Seas Expedition was awaiting orders to sail, and all the while his expenses were increasing.

For all that, Lady Luck was really with him, although for some considerable time she would look more like her sister, Lady Disaster.

It was mighty good to be back for a while in his old home. Long days with his brother Dick, happy times getting acquainted with Dick's children, especially his young namesake. The eldest brother, Walker, was settled farther west with his family, and Dick would take over the homestead farm and manage that with his own adjoining acres.

Evidently the plan made had been to go home by way of the Cumberland and Ohio Rivers to the western edge of West Virginia (still part of Virginia then and until the Civil War) and probably up the Kanawah River to Charleston, from which the stage roads to Fredericksburg were in fair shape and well traveled. At least Matthew, writing to his Cousin Ann, told her: "The Navy Department will not allow me to wait here for the rising of the waters, and I am afraid to venture with the old people on the very rough roads between here and Louisville, Kentucky." You saw a good deal of the country going from one place to another in those days. He adds that his mother "who is as untraveled as Aunt Herndon was, thinks she could perform the trip from here to Fredericksburg on horseback! . . . My father's voice, which was always powerful, is as strong as ever. He frequently exercises it in calling in his hands . . . it can be heard distinctly a mile off; under favorable circumstances it has been heard two miles." That record makes you think of Swiss yodelers in their mountains.

For a while there was another plan; his parents would go down the Mississippi to spend the winter with one of their married daughters, living in New Orleans, and then, when spring was well along, come on up to Fredericksburg. But this, too, was finally decided against. They would stay where they were, comfortably at home, until Maury could send for them. Sudden orders had arrived bidding him to join his ship at once so, with the coming in of October, Maury was off, by the northern stage route, via Kentucky, Ohio and Pennsylvania to New York.

"I cannot hope to come here and take them back with me now, but John's son, young Dabney, will do it for me. He is a fine young fellow, and they'll be as safe with him as with me," Matthew told Dick, as they said good-bye. "Probably May will be the best time. I wish you could pay us a visit, Dick, but you are too tied down here. As for me, I'll be measuring and sounding and taking observations in and along the coastline south of Georgia and probably all the way back again. I rather favor South Carolina myself, and I have a notion, too, that Memphis, here in Tennessee and right on the Mississippi, would be a first-rate place to have a navy yard. Perhaps we can get it someday, but no one will listen to such a notion at present."

He climbed aboard the stage, a little heavy-hearted. He was not even to have the few days at least he had hoped for at home in Fredericksburg.

They had been several days on their way and were nearing the little town of Somerset in Ohio. Night had fallen, and so had a cold rain, that still poured down steadily. Maury sat beside the driver huddled in his cloak. He had given up his seat inside the coach at the last stop to a woman who had a baby with her, and he was the only outside passenger.

Suddenly, rounding a turn in the road, the stage swayed violently, the horses plunged as the driver swung his whip with a

shouted oath, and then over they went. An embankment had given way. Maury was thrown some distance, landing with a sickening shock. For a few moments he was dazed, but did not lose consciousness. A terrific pain in his right leg made him groan.

"It's broken," he told himself, pushing into a sitting position. Confused cries were coming from the dark huddle of the coach. The driver had got one of his lanterns free and was helping his twelve passengers to scramble outside — none were badly hurt, not even the baby, and having made sure of that the driver, with another man, came to Maury. He told them his leg was pretty badly smashed, and that he'd better stay as he was until help came.

"This gentleman, Mr. Elton, is going to ride one of the hosses to Somerset, and send back one of our coaches and a new team. Other hoss here is lamed." The driver turned to Elton: "If you could scare up a doctor to come along with it, might be a good idee."

"I'll see to that. Wonder is that half of us ain't killed, but it looks as if you, Mister, was the only one got more than bumps an' scratches. Well, I'll be off."

It was a dismal wait in the dark and rain, some of the women crying, but at last the help arrived. Maury was carried carefully, under the doctor's directions, to be propped at the forward end of the new stage, his legs stretched in front of him. The rest of the passengers were put in or outside as space availed, and the return trip to Somerset, only a couple of miles, made gently. Once in the town, Matthew was taken to the Hotel Phoenix, there being no hospital, and put to bed. The surgeon then set to work. The right knee was transversely dislocated; the thigh bone had a bad longitudinal fracture.

The injury was bad enough, but perhaps worse was the fact

that the surgeon was an incompetent man. He got the knee back into shape, but set the bone so badly it had to be broken and reset when a competent doctor came down from Columbus to see poor Maury on the advice of his family. As this was before the days of anesthetics, the process was hideously painful.

But this accident, like the earlier one in his boyhood, was to prove immensely fortunate to his career.

Maury was tied to his room in the Hotel Phoenix for three months, and then began hobbling about on crutches. His ship still waited in New York Harbor, and his whole mind was set on getting there before she sailed.

Soon after the start of the new year, deciding he was strong enough to make the journey, he set off, going by sleigh, for the snow lay white and firm under the dazzling winter sky. Crossing the Alleghenies, however, a fresh snowstorm delayed them and when finally Maury and his crutches reached New York, the *Consort* had sailed.

It must have been a relief, for the man was still far from well. He wasted no time getting home. Here he could rest, he could gather strength, he could be content. His wife, his children, his relatives were all about him, the home he loved and the mild Virginian winter. Only there was anxiety as to his future. Suppose he did not recuperate sufficiently for duty at sea. What then of that future? He wrote again to his favorite cousin Ann on February 15, 1840:

"I have not been long enough at home yet to systematize my time, and therefore have not set about anything in particular. In fact, I have not yet done playing with the children." He tells her that sometimes — when he becomes desperate — he thinks he will write, but that he is daunted by the vast tracts and wastes and seas of unexplored knowledge, and his ignorance sickens him. "Perhaps it will be better to cultivate a few patches of

knowledge: shall they be light or heat — storms or currents — ship building or ship sailing — steam or trajectiles — hollow shot or gravitation — gases or fluids — winds or tides? In the wilderness of subjects the mind is confused — so I play with the children and bend the knee." For the knee remained very stiff, and each day he exercised it.

In the summer of 1838 Maury had written a series of five articles, and in December of that same year seven more, for the Richmond *Whig and Public Advertiser,* the first group under the pen name of Harry Bluff, U.S. Navy, the second purporting to be "From Will Watch to his old messmate, Harry Bluff." In both these series Maury expressed himself frankly and freely upon the inefficiency of many naval matters. In the first he got in some good body blows at Dickerson, happily gone from the secretaryship. In another article he gave his sarcasm a free rein in regard to the appointment of Wilkes as Commander of the South Seas Expedition by Secretary of War Poinsett. In the later group he gave a great deal of attention to the amount of waste in building and repairing ships. He also came out strongly for the establishment of a naval school. "Why," he wanted to know, "are not steps taken to have our officers educated and fitted for this high responsibility? The idea of a naval academy has been ridiculed. This may be the fault of Congress: I will not lay the censure at the wrong door — but the Department has been equally inattentive to providing the young officers with the proper means of learning even practical seamanship."

He also demanded a proper system of rules and regulations instead of the haphazard jumble that then prevailed. Naturally the articles created a good deal of comment. No one had ever dared criticize so forthrightly and so openly the many inade-

quacies which were freely enough remarked on by leading men in the Navy among themselves. Truth was that the Navy was in a soggy period. The great days of fighting and adventure appeared to have ended. A large percentage of officers were, as Maury had said in one article of Lieutenant Wilkes, "cunning little Jacobs who had campaigned in Washington for a full term of seven years." It was high time some one spoke out in meeting.

Maury made one more effort, in March of 1840, for sea duty, writing to the Secretary of the Navy Paulding for anything he could do on crutches. Very naturally this was refused and he was relieved for the present from active duty. It was then that he decided to try some more writing. The Editor of the *Southern Literary Messenger* was anxious to have articles from him, and he had plenty more in his head to say about the Navy and what it needed to bring it to full efficiency.

So he began the series which he called *Scraps from the Lucky Bag.*

The lucky bag, aboard a ship, was the receptacle for any odds and ends, lost and found and stuffed into a big sack hanging in the fo'c'stle. It was an excellent title that allowed the author to touch on unrelated subjects that still had a sea-going connection. He prefaced the series with this jingle:

Shoes of middie and waister's sock,
Wing of soldier and idler's frock,
Purser's slops and topman's hat,
Boatswain's call and colt and cat,
Belt that on the berth-deck lay,
Into the Lucky Bag find their way;
Gaiter, stock and red pompoon,

Sailor's pan, his pot and spoon,
Shirt of cook and trowser's duck,
Kid and can and "doctor's truck,"
And all that's lost and found on board
In the Lucky Bag's always stored.

CHAPTER 7

He Begins His Life's Work

THERE WAS scarcely a point affecting the Navy Maury did not discuss, without fear or favor, through 1840–41 in his *Scraps*. He still wrote under the name of Harry Bluff and very few knew who Bluff was. Mr. Thomas W. White, Editor of the *Messenger*, Matthew's immediate family and a few friends probably summed up those in the know. But from the beginning the articles raised wide comment and, among many, considerable enthusiasm. Not only the Navy but the future of the country, the possibilities, the dangers that might threaten her, these came into the sweep of his interest. He foresaw an America that is an America we recognize today, but then was something undreamed of by most. In one of these articles, for instance, he spoke of the Pacific Coast and its importance as no one had ever done, trade importance, because one of his obsessions was the value to the country of sea-borne trade.

"If you have a map of the world," he wrote, "turn to it, and, placing your finger on the mouth of the Columbia River, consider its geographical position and the commercial advantages which, at some day not far distant, that point will possess. To the south, in one unbroken line, lie several thousand miles of coast indented with rich markets of Spanish America — to the west, Asiatic Russia and China are close at hand — Between the south and west are New Holland and Polynesia; and within good marketable distance are all the groups and clusters of islands that stud the ocean, from Cape Horn to the Cape of Good

Hope, from Asia to America. Picture to yourself civilization striding the Rocky Mountains, and smiling down upon the vast and fruitful regions beyond, and calculate, if you can, the important and future greatness of that point to a commercial and enterprising people. Yet the first line in the hydrography of such a point remains to be run. It has been more than twenty years since an American man-of-war so much as looked into the mouth of the Columbia River. Upon what more important service could a small force be dispatched than to survey and bring home correct charts of that river and its vicinity?"

This was in 1840, five years before Frémont's famous Third Expedition was to march out from Westport, port of the Kansas City, Missouri, of today, where the Santa Fe Trail started, to break a direct trail to California, and in the year following raise the Bear Flag and take California from the Mexicans. A great many Americans when Maury wrote that *Scrap* had not so much as heard the name California, although American merchant ships had begun to trade, and many a Yankee to prosper in that part of our Continent. And the casual reference to Asiatic Russia and China as "close at hand" sounds very much of today.

Graft was common then, also as today, and Maury sailed into the Board of Navy Commissioners, letting out a broadside that resulted, in 1842, in making an end of a setup of anything but honorable men who had held the Navy building and repair business in a tight and dirty grip for some twenty-seven years. He had all the data at his pen's point, facts, figures there was no disputing: "Vessels are built at twice the sum they ought to cost — they are repaired at twice as much as it costs to build — the labor to repair costs three times as much as the labor to construct." No one could deny these statements. Nor did he end there: "The same articles for one ship cost four or five times as much

as their duplicates for another — it cost twice as much to repair ordnance and stores for a ship as it does to buy them."

What was needed was a Bureau System with divided responsibility, he declared. And that was what, in 1842, the Navy got.

He had a word about the catch-as-catch-can system of promotion, too. He wanted promotion taken out of politics, so that it might no longer be true that, as the saying went, "a cruise of a few months in Washington tells more than a three years cruise at sea." There ought, he suggested, to be the kind of promotion that would be an incentive and help to the ambitious and hard-working officer. Each grade should have a standardized number of officers. Also he wanted the revenue service taken over by the Navy.

A matter he returned to was, of course, education. Why should there be a West Point for the Army, and nothing for the Navy? As it was, some inefficient young schoolmaster would board a ship, teach nothing, and leave it again. Most midshipmen were not required to know more than a few of Bowditch's rules by heart, a little trigonometry, some practical knowledge of sailing a ship. He suggested a four-year course, with two months at sea each year, part, at least, to be spent in foreign waters. As to subjects, they should be much increased. Astronomy, mathematics, gunnery, chemistry, of course. But also navigation, tactics and discipline, international law, maritime law, and languages — nor was the least of these to be "that most difficult, careful, arbitrary of all languages, English." He also wanted drawing and naval architecture included. Again he spoke before his time and for a day to come.

Higher grew the chorus of praise these articles were evoking. Navy officers were among his most enthusiastic admirers. A group clubbed together, had large numbers of the *Messenger* printing the articles sent them, and distributed them free wher-

ever they believed it would do the most good. Who is he? Who is he? was asked everywhere. To respond to such inquiries the *Southern Literary Messenger* in its issue of July, 1841, published an article, signed "A Brother Officer," giving an outline of Maury's career and prophecying that the enthusiasm Lieutenant Maury had roused would not subside until the Navy had been thoroughly reorganized.

Naturally there had been previous suggestions that the Navy should have a school, but Maury was never content merely to make a gesture in the air. He kept at his theme, he gave well-thought-out directions, clear reasons for it. He suggested a schoolship, thinking it might be easier to make a start with that; but when he got evidence that his ideas were being heartily received, he came out flatly saying that the Navy ought to have its own school, as the Army had West Point, "even if it has to be built on top of the Rocky Mountains." He had his own preference, however, and that was Memphis, Tennessee. For one thing he believed the Mississippi would prove excellent for experimenting with steam-driven ships, for which he felt sure there was a great future; also, since the Army's school was established in the East, why not put the Naval Academy in the West — Tennessee being the West at that period.

In the end, which means four years later, in 1845, it was Annapolis, Maryland, that became the site for the Naval School, as it was first called when George Bancroft, the historian, founded it, he being then Secretary of the Navy. But it is Maury, rather than Bancroft, whom the Naval Academy honors as its Father, and very justly.

In fact, almost everything Maury recommended for the Navy has come to pass; a great deal of what he suggested being passed by Congress almost at once. As Maury's fame rose it began to be rumored that there was a plan afoot for making him Secre-

tary of the Navy. The Washington *National Intelligencer* started the suggestion, but Matthew himself did not take this very seriously. He wrote his parents early in 1841 to that effect: "I do not think there is much danger of my having a Cabinet appointment inflicted upon me. The newspapers continue to discuss the subject though, with much earnestness. That I should be brought forward and commended is of course very gratifying to me, as I am sure it must be to you also. But in these times of party rancor and bitter political strife, high places in the State edifice are far from being desirable for those who value peace of mind."

At an earlier date he was able to write: "My leg gains slowly . . . I can walk now with the assistance of a stick only; but a walk of two or three hundred yards breaks me down. A terrible calamity is this indeed, to me."

He used to speak of his right foot as his "pet," because he had to use it so gently to keep from straining the knee. For it was the knee that bothered him most.

In May of this same year he sent his nephew Dabney, his dead brother's son who, with his mother and brother, now lived with him, to fetch his parents. Even the roomy Maury home must have been well-filled when these joined them. But all were used to big families and being much together, and it was a happy return "home" to the old people, so close to the farm where they had lived their early married life and seen their children born.

With November, 1841, Maury brought his *Scraps from the Lucky Bag* to an end. He had recived a letter from Captain, now Commodore, Thomas Ap Catesby Jones, then commanding the Pacific Squadron, asking him to be his flag lieutenant, a position which would call for a physically light type of work, which Maury was sure he could fill. Knowing that his family

would go wild with protest, Matthew made an excuse for going to Richmond, writing to the Secretary of the Navy from there. As it happened, he ran into one of his friends, Judge John T. Lomax, who also had come to attend to business at the capital.

"This is fine, Matthew. I didn't know you were here, but as you are and as it's just about dinner time, come along with me. I never get half the opportunity for a talk with you I want."

Dinner in those days meant about two in the afternoon, and as Matthew had sent off his letter he was only too glad to spend an hour or more with the judge. Of course the judge wanted to know what special business had brought his friend to the city. Matthew, not given to camouflage, told him. Judge Lomax received the information in silence, and without enthusiasm.

"Don't look so disapproving, John. I can't sit around Fredericksburg forever writing for the *Messenger.*" Matthew laughed. "But of course I know Nannie won't want it and so — "

"So you sneaked off here where you were sure she wouldn't catch you making any such crazy suggestion. I see. Well, I hope the secretary will have sense enough not to appoint you." With which the subject was dropped and the talk swung to other matters.

But the judge, too, was wily. After seeing Maury off for Fredericksburg he went to his hotel and wrote the secretary that Lieutenant Maury was not in fit physical condition for sea duty, adding that he would get the opinion of Fredericksburg's three leading physicians on the subject and forward them at once.

All three doctors were quite firm in their conviction that, although Maury's leg was steadily improving, he was not yet in any condition to support active duty at sea. The result being

that he was retained on the list of those naval officers "awaiting orders."

The flurry over having Maury made Secretary of the Navy had died down, even as he had himself predicted. He returned to writing, even undertook the editing of the *Messenger* in 1842, when White was ill. In a series under the title *Letters to Clay* published in the *Messenger,* Maury wrote under a new pseudonym, *Union Jack,* late in 1841, before Clay retired from his ten years as United States Senator from Kentucky, advocating various measures, one the building of a national dockyard at Memphis, another the establishing of government subsidies to encourage the building of steam packets. Both England and France were doing this, and they stood to take away much of the sea-borne traffic from America. Another of these *Letters* asked that a canal from the upper waters of the Mississippi to the Great Lakes be constructed, on which steamboats could be run. In case of war with Britain such a canal would be of great defensive value. He touched on many other matters connected with spreading American influence on the sea, one being the searching of American ships coming from Africa by Britain, who was doing her best to put an end to the slave trade, but which was an arbitrary act that ought not to be permitted.

Indeed, there was very little on national and international matters left out in the various articles written through the years 1840–41, and the early months of 1842, when much concerning America was in flux. There was a row on with England, for instance, concerning the boundary line between Maine and Canada; fiery persons were already yelling for war; but to Maury, as he expressed himself, a war between Great Britain and the United States would be "one of the greatest calamities, except a scourge direct from the hand of God, that could befall

my country." Yet, he added, "however that might be, were war to come, the Stars and Stripes, the Navy was determined, shall not be disgraced on the ocean."

Then, suddenly, the whole scene changed. On July 1, 1842, Secretary of the Navy A. P. Upshure appointed Lieutenant Matthew Fontaine Maury Superintendent of the Depot of Charts and Instruments, in Washington. The Depot was twelve years old and had already had three superintendents, one the Charles Wilkes who had drawn Maury's fire in regard to his appointment in the South Sea Exploration affair. Wilkes had had the office moved up to Capitol Hill, where Congress could perhaps be persuaded to do something for it. When Maury received the appointment he was told that a proper building and adequate equipment were forthwith to be built and installed. A month after he had been put in charge Congress appropriated the sum of $35,000 for these purposes, the new building to be placed on a reservation of some seventeen acres at Twenty-third and E Streets, N.W. This particular site had been set aside by George Washington, who wanted a university there, a great university to outshine Harvard and Williamsburg's William and Mary.

It took two years to finish the Observatory, as it was now to be known. Sometimes it was alluded to as the Naval, sometimes as the National Observatory, but ten years later the then Secretary of the Navy officially renamed it the United States Naval Observatory and Hydrographical Office. After the Civil War it dropped the Hydrographical Office addition, when that office became a separate institution with its own quarters.

The Observatory, set in its wide grounds, was a handsome structure in Eighteenth-century style, of brick with white stone window and pilastered door frames, roof railings and steps. The central building was topped by the observatory dome, also

painted white, and there were three wings, one on either side and one at the back. In 1847 the Superintendent's dwelling was added to the eastern wing, built in the same style as the main structure, but not as large. Each was two storeys high and square, the connecting wings one storey and oblong. The whole effect was excellent.

Before this attractive addition to Washington's official buildings was ready Maury had moved the office of the Depot to a house on Pennsylvania Avenue, where he and his family could live, although not with the spaciousness of Fredericksburg. For some time he "batched" it, for there was a good deal to be managed before the Fredericksburg house could be given up and the moving of the large family made.

While still at home with his family the main idea had been to keep Matthew quiet, off his feet, more or less in the invalid state. Now that he was on his own and intensely occupied with grasping the details of the new work, meeting many of the men interested in, or later on to work with him in the labors of the office, he paid little or no attention to the fact that he had a game leg. This produced unexpected results, so that, writing to Cousin Ann on August 4, he told her: "The additional exercise which I have been obliged to take here, has proved of the utmost service to the leg. On one or two occasions I have been on my feet from eight or nine in the morning till eleven at night. The leg strengthens under it all the time. I am on my feet, standing or walking most of the day; but, unless I go down to the city, I never touch my cane. It stands in the corner looking like a cast-off friend."

He liked his new duties from the very first. Saw vistas and possibilities opening. There was first the business of arranging the office of the Depot to the best advantage, and there was much consulting to do in the matter of the future installations,

when the Observatory should be ready for use. In addition the new Superintendent had to study the advances made in astronomy in the immediate past, which had been considerable. Lieutenant James M. Gilliss, who had been Maury's immediate predecessor in the office, was in Europe, buying instruments. Gilliss had always been keenly interested in astronomy as it affected the science of navigation, and was the ideal man to send abroad on such an errand. Some persons thought that he should have remained as superintendent, but, excellent as he doubtless was in his particular field, he did not have the breadth of view which distinguished Maury. Senator John H. Bell, from Tennessee, told the Senate, after Maury had begun to prove himself in his new position, "No man could have been found in the country better fitted than Maury for this difficult duty; and he works with the zeal and energy expected of him."

No doubt of that. When it came to work few could outlast or outdistance Matthew Maury. He was in his thirty-sixth year when appointed, and had been serving in the Navy for seventeen years.

In mid-October he wrote Ann Maury that Lewis Herndon, his wife's brother, was now attached to his office and that he and his wife "are messing with me now." Evidently his family had not yet joined him, but they did so before winter set in. He had been to New York on business; his leg must have been practically healed, for no further mention of it nor of the use of a cane is to be found.

It was not until October 1, 1844, that Maury moved into the new Observatory with a staff of line officers, naval and civilian professors. Most of the new instruments had arrived and he helped install them, working with delight over the beautiful things, capable of such wonderful uses. Of one, the Great Refraction Circle, he enthusiastically wrote a friend that it was so

exquisite a piece of machinery and withal so beautiful he'd like to wear it around his neck as an ornament!

Besides the change in his professional life, the year 1842 brought both grief and joy to the Maurys. His parents died in this year — the mother a month or so after the father. The two had always been very close, and it seemed a sweet and natural thing, their son felt, that they should go on into the new life so nearly at the same time. He had been able to leave Washington and be with each of them when it was seen that the end was near.

The joyful event was the birth of his first son, Richard Launcelot, somewhat earlier.

"The Lord giveth, and the Lord taketh away," Matthew said slowly to his wife, as the two drove back from the funeral of his mother. "Blessed be the name of the Lord." His eyes were full of tears but he spoke quietly, even peacefully. "They lived a full, good life, and were happy in each other. We, my dear, know what that means."

CHAPTER 8

The First Wind and Current Chart

MAURY HAD scarcely settled himself in the temporary quarters on Pennsylvania Avenue when he set to work on a project dear to his heart, one that had pestered him ever since his second South American cruise, but more particularly since the days when he was sailing master of the *Falmouth,* and had tried in vain to get definite information on prevalent winds and currents that would help or hinder the speed of his ship.

A great pile of old log books, considered rather in the light of rubbish, had been brought with the rest of the Depot's paraphernalia, to lie in a corner of the main office, awaiting whatever future disposition would be made of them. These log books had been turned in through a number of years by the captains who sailed the oceans broad; those old sea dogs would have been surprised to see with what care and eagerness they were now being studied by the new Superintendent.

Nothing, so far, had ever been done to tabulate, record and draw information in a usable manner from these old books. There was no such thing as sailing directions for the use of navigators. The tradition of the seas, the talk between one captain and another, records of either very lucky or very unlucky trips, notes on weather conditions set down in the log as experienced on this or that day; but nothing whatever as regarded the *habits* of weather, of winds, or currents, of temperatures in air and in water. Meteorology, the science of the atmosphere, particularly in relation to climate and weather, which was of prime

importance to the sailor, had been utterly neglected. The captains of the vessels that sailed the seas were not scientists; their training fitted them to keep their ships afloat and moving, let conditions be what they might. They observed these conditions and remarked upon them. In fact, as Maury studied these logs, he realized what a vast amount of observation was to be found in them. But each log book, as it were, talked to itself; there was no conversation. He was fascinated with his study. Presently he began to move more easily in the tangled mass, to discover the secret of the maze, to discover proof that he was right in being certain that wind and wave had their laws, were governed by rules which could be set down and used to advantage.

What he needed was more definite detail, detail entered on charts supplied for that purpose. These charts he planned to have made, and to be given to ship commanders with the request that each one should lay off on his chart, marked ready with meridians showing latitude and longitude, each day's course, with the time of the year, the direction of the wind, the force and flow of currents — with any other items in regard to the navigation of the ship as it was affected by natural causes. In the summer of 1843 he read a paper on this subject, *Blank Charts on Board Public Cruisers,* before the National Institute. He also asked that a committee of the members call upon the Secretary of the Navy, Mr. Upshure, asking him to authorize that these blank charts be kept on all public cruisers.

In his talk before the Institute Maury claimed that luck did not make for a short, quick voyage; it was choosing the right trail across the sea. He said his chart "proposes nothing less than to *blaze a way* through the winds of the sea by which the navigator may find the best paths at all seasons."

As usual, it was the man who didn't know and didn't care who had the say-so. The Secretary asked Maury to draw up a

set of instructions, then he let the matter drift. But Maury still persisting, a copy of these instructions was given to Commodore Biddle, who was on the point of sailing for China. Nothing further seems to have been done for the time being about Maury's suggestion.

Leaving this problem for a time, Maury asked to be allowed to make a chart of the American Atlantic seacoast. Up to then, America had been content to leave to Britain the charting of coasts and islands. America, in fact, had contributed practically nothing to the study of nautical science. "It makes me ashamed that an American man-of-war has to get her chart from England for sailing up Chesapeake Bay to Washington," Maury wrote the Bureau of Ordnance and Hydrography. It seemed to him intolerable that the British Admiralty had to supply Yankee skippers with maps of their own seaboard. Without Britain's *Nautical Almanach,* an American vessel would be lost — could not make a home port from a foreign one, could not so much as lift anchor in its own harbor and take to the high sea with any confidence of getting not alone to the foreign port but of finding the way home again. These facts had been borne in upon him during the year of observations carried on in southern ports. Now he started the work of charting our own coast, which was, of course, carried on into the future and finally over the world.

Getting so far practically no support for fresh information from ships at sea, not being able to push the Secretary into doing anything, he went on working with the old log books. There was a great deal of value in them, to be found by matching up one series of observations with another, but there were also vast gaps. The charts he had in mind were to have no gaps, and must be the result of observations taken and set down by thousands of ship commanders as they rode the seas. For all

that, he knew that an incomplete chart would be far better than none, that it would be a revelation to the intelligent officer or merchant captain, an incentive to help in the work of filling the gaps.

There was plenty to keep him occupied through the day, but after supper he would sit down in the parlor, a pile of log books at hand, to work cheerfully away, undisturbed by whatever might be going on around him. Diana might be rocking small son Richard, Goggens, as his Dad called him when Dick seemed too formal, the two little girls chattering together over their toys, the nurse coming and going, her black face smiling, her rich negro voice asking questions of the mistress, or speaking to the children; it all, far from distracting him, made work easier. If Betty scrambled to her feet and came over to ask a question of her own, he would stop his work, pull her up on his knee, talk a bit, laugh at her, exchange a smile with Diana, then set her down and plunge back into his reading or note-taking as though nothing had broken the thread of his thought. Even when he was writing an article he always enjoyed having the family about him, and never did he have a room to work in, a separate den, where all interruption was forbidden. To be sure, when deeply engrossed, perhaps striding slowly back and forth in the room, he appeared unaware of what was going on. One of the children might grasp his hand and march alongside, or, had he put on a dressing gown, catch hold of the trailing rope ends and play he was a horse she was driving, with cheery cries of "get-up, get-up," or stern "whoas" without her father being at all conscious of what was going on.

During 1843 he wrote several articles on topics that roused his interest — an interest, always alert for something that needed doing. One such article took up the subject of *Lighthouses on the Florida and Gulf Coasts,* emphasizing their necessity, sug-

gesting the exact sites where they should be built. Also this year he returned to his old love, Memphis, where the navy yard he had advocated in his *Scraps* was now established. This time he asked that a Navy officer be sent there to make careful, systematic observations of the rise and fall of the water, measuring this ebb and rise every day of the year; also to take the velocity of the current, not alone on the surface, but close to the bottom of the stream, finding what volume of water passed a given point each separate day. Nor was this all. The officer must note the temperatures of air and water at stated periods, with the amount of evaporation, or of precipitation, and take a daily measured amount of water from the flowing current in order to evaporate it and discover just how much silt it held.

A young Lieutenant Marr, in whom Maury had great confidence, was delegated to this task, performing it so thoroughly and carefully that the results, studied and correlated by Maury in an excellent paper, proved to be the starting point of all that has since been learned about the moods and habits and character of our Father of Waters. The War Department, later, carried on further observations, but it was Matthew to whom they owed the ground work and the inspiration.

All his life he was a source of inspiration, as well as a great workman. There was little within his broad field of interest that he missed. Wherever water and land met he was apt to discover some still unresolved problem and to tackle it. He was, for instance, the first to urge building the Panama Canal across the narrowest part of the Isthmus where it now cuts the continents apart. There had been a good deal of discussion over a canal to flow between the Gulf of Mexico and the Bay of Tehuantepec, but Maury was able to show that this site held enormous difficulties both as regarded land and water. He also had on file some interesting letters concerning still another route,

across Nicaragua, but "my information is not yet sufficient for me to form an opinion" on that site, although he admitted it appeared to have some valuable advantages.

Another canal he advocated in a paper he wrote on *The Defence of the Lakes and the West* was the Illinois and Michigan ship canal. The Northwest was very enthusiastic about that. In those years Canada was a threat, not the friend of today, and the still unsettled frontier a sore spot between the two countries.

In 1847 the new house for the Maurys was finished and the family moved in. A large family, they were glad to get out of the narrow quarters in the Pennsylvania Avenue makeshift home, for there were now five children instead of the three who had moved in. A son, John Herndon, was born in 1844; another daughter, Mary, about eighteen months later. John was nicknamed Davy Jones; Mary, more conventionally, became Mollie. Matthew, who had written brother Dick so long ago that four was all he wanted, delighted in the increasing brood. Much of his work, as usual, was done in the parlor of the new house, with the family carrying on its life about him, the two little girls playing in a corner, or joining their young brothers in a game of hide-and-seek, while the baby girl sat on her mother's lap, babbling chatter an outsider would perhaps fail to understand although her family had no such difficulty. Amid all this Maury would sit at his log books and wind and current chart, utterly undisturbed. The long labor of compiling the first was practically over. It was issued this year, 1847, and 1848 saw the publication of a ten-page pamphlet, *An Abstract Log for the Use of American Navigators,* a cumbersome title its author changed to the simple *Sailing Directions* before it appeared.

Proof of the value of these two aids to mariners came almost at once. A Captain Jackson, commanding the *H.W.C.D. Wright,*

of Baltimore, used both on the round trip to Rio de Janeiro, reducing the length of his voyage by twenty days. He was filled with enthusiasm and hearty in saying so. The news spread quickly among seamen, demands for copies of chart and sailing directions poured in. From that time on an ever-increasing wave both of inquiry and response reached Maury at the Observatory. As soon as they understood what was wanted of them sailing masters were eager to cooperate. Demands for the charts, which were sent free on application, poured in. These charts, known either as abstract or blank charts, were really patterns of lines and spaces indicating to the navigator the various items of information, and of observation, to be filled in.

The saving of time on a voyage meant, for every merchantman trading to all the various ports of the world, a saving in money. Before Maury published his wind and current charts the average length of time it took a clipper ship to make the voyage from New York to San Francisco was 180 days. These clippers were the finest and fastest sailing vessels in the world, sailed by men who knew their business from a to izzard. Within the next ten years, from 1840 to 1850, these ships reduced the average, using the charts, to 133 days. Quite a sizable reduction. Then, at the end of 1850, came the amazing voyage by the *Flying Cloud,* lovely name of a noble clipper, from New York to San Francisco in 89 days and 21 hours. This started the clippers to racing each other, and though the *Flying Cloud* still held the record, the first race, sailed in 1851 between the *Raven,* the *Typhoon* and the *Sea Witch,* which the *Raven* won in 105 days, followed closely by the other two, made a splendid showing. The year before, the *Raven* had made the same trip in 97 days, for of course winds did not always blow with precisely the same force. Another great race between the *Wild*

Pigeon, the *John Gilpin,* the *Flying Fish* and the *Trade Wind,* the first ship leaving on October 12, the last on November 14, was won by *Flying Fish* in 92 days.

One can imagine how the taverns where the men of the sea met hummed with the news, how toasts were drunk to the Superintendent of the National Observatory, and, more to the point, how captain after captain joined in filling out their abstract charts, sending them in at journey's end to Matthew Fontaine Maury, according to directions, often with a letter expressing thanks to him, and satisfaction in being able to help in his work. One such letter from a Captain Phinney, commander of the clipper *Gertrude,* gives an interesting insight into the type of man commanding American ships.

"Having," wrote the captain, "to proceed from this port to the Chincha Islands and remain three months I avail myself of the present opportunity to forward to you abstracts of my two passages over your southern routes, although not required to do so until my return to the U.S. next summer, knowing that you are less amply supplied with abstracts over these regions than many other parts of the ocean. Such as it is I am happy to contribute my mite towards furnishing you with material to work out still farther towards perfection your great and glorious task, not only of pointing out the most speedy route for ships to follow over the ocean, but also teaching us sailors to look about us and recognize the wonderful manifestations of the wisdom and goodness of the great God, by which we are constantly surrounded. For myself I am free to confess that for many years I commanded a ship, and although never insensible of the beauties of nature upon sea and land, I yet feel that until I took up your work I had been traversing the ocean blindfold; I did not think on, I did not know, the amazing combinations of all the works of Him whom you so beautifully term 'the first great Thought.'

"I feel that, aside from any pecuniary profit to myself from your labours, you have done me good as a man. You have taught me to look above, around and beneath me, and to recognize God's hand in every element by which I am surrounded. I am grateful, most grateful, for this personal benefit. Your remarks on this subject, so frequently made in your work, cause in me feelings of the greatest admiration, though my capacity to comprehend your beautiful theories is but limited. I have spoken as I feel, and with sentiments of the greatest respect, I am . . ."

That letter must have gone straight to Maury's heart.

It shows that Maury wrote no dry-as-dust stuff in those *Sailing Directions* of his. The first, to be sure, confined to its ten pages, was largely given to instructing the skipper in what was expected of him. There was an explanation of the significance of the wind and current chart, then he was asked to do his share in making the chart more reliable, by adding his experiences to the rest which should be turned in, each contributing something of value to add to what here appeared. The rules for filling out the abstract log were simple to any navigator; the importance was to make them complete. The latitude and longitude were to be entered every day at noon; the hourly rate of current in knots set down; the variations of the compass marked; thermometer readings, both of air and water, set down at nine A.M. each day, variations in the barometer noted before, during and immediately after a gale, as well as the direction of the wind, with whatever changes in it were observed, and the times these occurred. Also regularly, every eight hours, the direction of the wind and its force.

Besides, the commander was asked to report whatever he saw that had direct connection with the ocean and the air above it, such as whales, flocks of birds, rain and fog. Here is where the

captain, like Phinney, began very likely "for to behold and for to see," as Kipling puts it, more thoroughly and more alertly than ever before. Unlike Kipling's sailor, who decided it did no good, these captains knew it was to do great and lasting good to all the men who sailed what was no longer to be the trackless ocean.

By the time Phinney sailed, Maury's *Sailing Directions* had reached their sixth edition, and were no longer a pamphlet but a stout volume of close upon a thousand pages. In this issue Maury was able to write about the great races of 1851, 1852 and 1853. He did it with a charm and color that made for easy reading to the sailor in his cabin on the high seas. After giving the rules and results of the different races Matthew writes:

"Here are ships sailing on different days, bound over a trackless waste of ocean for some fifteen thousand miles or more, and depending alone on the fickle winds of heaven, as they are called, to waft them along; yet, like travelers on the land bound upon the same journey, they pass and repass, fall in with and recognize each other by the way; and what perhaps is still more remarkable is the fact that these ships should each, throughout that great distance, and under the wonderful vicissitudes of climates, winds and currents which they encountered, have been so skillfully navigated that, in looking back upon their management, now that what is past is before me, I do not find . . . they could have been better handled. . . Am I far wrong, therefore, when I say that the present state of our knowledge with regard to the physical geography of the sea has enabled the navigator to blaze his way among the winds and currents of the sea, and so mark his path that others, using his signs as finger-boards, may follow in the exact track?"

As it happened, in that coincidental way so common in nature and in history, the Gold Rush from the East to California started

in 1849, just as Maury's charts were coming into fairly general use; hence it was that a swift passage to San Francisco had suddenly become of such great importance. Possibly his charts might have had to hoe a slower path if James Wilson Marshall, splashing about in the millrace at Coloma, on January 24, 1848, had not picked up the lumps of virgin gold that were to make so immense an effect on the American Nation, to hustle her ships over Maury's tracks, bring her trans-continental trains, which he was one of the first to suggest, and transfer a sizable portion of citizens from one seaboard to the other. Concerning possible railroads Maury corresponded with a number of influential and intelligent men in regard to the feasibility of building two lines across the continent, declaring his own conviction that this could be done, and that *one should be through the Northwest, the other through Texas.*

Not only America but Europe began sounding the praises of the *Wind and Current Charts* and the *Sailing Directions.* Maury had sent copies to the various powers likely to be interested, asking the cooperation of their own ship commanders in marking the abstract logs according to directions. With the consent of his government these charts and directions were sent without charge, either to the foreign governments, or to the seamen who used them. Presently he was beginning to receive the filled-in logs from ships in all parts of the seas. Fresh stuff, intelligently set down, instead of the dusty and incomplete records he had worked with so long. He would come home to his wife, his eyes brilliant with delight, to report on some specially interesting log, kept with perfect care, acute observation revealed in every detail:

"There's a man! I can follow every step of his trail, almost feel the wind in my face, the swing of the current — I tell you, Nannie, we're making the very earth smaller, measured by time.

Days, even weeks, closer to each other. It's like learning a new language, the language of Nature, counseling, advising, guiding us. God has given his children, if only we take the trouble to study, to understand, the vast help of the natural world. The forces, the mysteries that seem so inimitable and so baffling, are our friends, our servants, our good companions. We have only to open our eyes and our ears, to use the brains we've been given, and to work together with Nature to begin to comprehend the infinite possibilities for use and goodness that lie within reach."

To comprehend. That was the essence — that and tireless labor, refusal to be discouraged. Circumstances and politicians got in his way, but nothing could stop him. He knew what he was about, knew it to be of high value. That was what mattered.

CHAPTER 9

A Great Convention at Brussels

IN THE year 1848 more than a thousand vessels were sending in to Maury the reports he had asked for, a number that would steadily increase, and which would spread throughout the ocean world. These reports, set down on the charts and according to the directions, were like manna from heaven to the Superintendent, who could at last heave aside the huge dusty files of the old log books, and, as it were, come out into the free air to receive the exact information he so wanted and so needed. Now he had his staff so trained that the routine work was out of his hands, giving that much more time for exploring new possibilities and ever-widening fields.

But there was hard going. As a lieutenant he drew fifteen hundred dollars a year as pay. This was not sufficient for the large family; in Washington expenses were higher than in Fredericksburg, nor was Maury able, in the early years in his new post, to get time for the writing and lecturing which had helped out in the past. Recognizing this, the Government allowed him another fifteen hundred — but in the winter of 1847–48 Congress failed to pass the appropriation — and in April, 1848, he wrote to one of his cousins, "No pay yet, and I am very tired of living on such slender means. Better times, I hope, are coming before long; this poverty is a terrible weight upon one's mind and wants." Just three months later he wrote again to the same relative that "the pay has almost passed the House, and I begin to think of increasing expenditure in the way of education, etc., for

the children, and church and social facilities, etc., for Nannie."

It did pass, allowing Maury $3000 and his house rent free, while in August of the same year he was granted an additional $500. He was at last able to live without the constant anxiety of money worries, simply as always, but pleasantly, even to entertain his friends and visiting scientists comfortably. His fame was spreading among European scientists, and presently the laying of the submarine cable was to open a new interest and fresh work for him, bring him into close touch with such men as Cyrus W. Field who wanted to employ him at a real salary. But Maury refused, because he preferred to be entirely free to comment upon the enterprise, to advise or criticize. Field and he first met in 1853, becoming fast friends. This was in July, just before Maury was to leave for Europe to attend a meeting at Brussels of an International Meteorological Conference to inaugurate a system of international observations based on his own work. At first Maury had wished the Conference to include the meteorology of the land with that of the sea, but British scientists to whom he wrote advised him to confine his plan to the sea.

For it was owing to him that this Conference was called. He had heard from so many men abroad wanting to know more of his theories and plans, expressing so much interest in the new science of the sea, that the idea of holding such a meeting occurred to him as early as 1851. What he wanted was the establishment of a universal system of observations; the best way to achieve it, to his mind, being to get together representatives from the different countries interested in such a plan.

Backed by Secretary of the Navy William A. Graham, who was thoroughly interested, Maury went to the diplomatic representatives of foreign countries in Washington to get them to spread the plan of such a meeting among the meteorological

scientists in their homelands. He was an enchanting talker on any topic interesting to him, and it wasn't long before the ball got rolling. Not only abroad, but Maury appealed also to scientific societies in America, to the Bureau of Engineers, the Smithsonian Institute, selected Cabinet Ministers, heads of the Coast Guard, and pressed the importance of such a meeting. Many a member among them came to dine at the Maury home, staying on for a long talk, going away full of enthusiasm. Dinner with the Maurys was apt to be remembered. Nannie was gay and lovely, the small company carefully selected and harmonious; Maury knew how to get the talk started, how to keep it going, and the talk was good. Good, too, the wine served, the dinner Nannie and her old cook had planned. No matter what language a guest might speak, Matthew usually knew it, was often fluent in it. And laughter was always at home with the Maurys, either when they were just the family, or had guests.

Finally nine countries besides the United States accepted the invitation to send representatives to the Conference: Great Britain, France, Russia, Norway, Belgium, Portugal, Denmark, the Netherlands and Sweden. They were to convene at the house of the Minister of the Interior in Brussels on August 23, 1853, with Jacques Adolphe Lambert Quetelet, the Director of the Royal Observatory of Belgium, as President.

As soon as this was settled Maury proposed to Nannie that he take the two older girls along with him. Nannie herself could not leave the home nor the children, particularly the two youngest, Lucy, born in 1851, and Matthew Fontaine, the year following and not yet at his first birthday anniversary. There was still another girl, Eliza, who had arrived, blithe and bonnie, in 1848, bringing the grand total to eight, where it remained.

After the excitement subsided in regard to taking Betty and Curly, Betty suggested they might ask their two cousins, Ellen

Herndon, daughter of their uncle on the mother's side, and Ellen Maury, daughter of one of the Maury cousins. The four were great friends, seeing much of each other, the two Ellens about the same age or a little older than Betty, now seventeen. The suggestion was presently, when the families got together, received jubilantly, and Maury, with his four "magpies" as they were nicknamed, sailed on July 23 for England. They had had plenty of time to get ready, to buy new clothes, to chatter wildly together, these four pretty young girls, and had even received an invitation from the President of the Royal and the Astronomic Societies of Britain, Lord Wrottesley, to accompany Maury on a visit to Wrottesley Hall as soon as they arrived. The two men had corresponded for a long while, drawn together by their mutual interest in astronomy.

The voyage was a delight to the girls, and a new experience to Maury in so far that he traveled for the first time as a passenger. Then came the visit to the great ancient house, which in Cromwell's day had been the convent of the White Ladies. It stands not far from Wolverhampton, almost in the center of England, and though there had been alterations since the days of the nuns, it was a magnificent relic of the past. In its noble park the girls walked with Maury and Wrottesley to see the Royal Oak in whose mighty branches Richard Penderhill, according to tradition, hid King Charles II who had been crowned King of Scots in January of 1651, but had seen his Scottish army almost annihilated by Cromwell in the following September in the bitter battle of Worcester.

"If Cromwell had laid his hands on the prince (for to England he was still the prince) his head would probably have rolled from his shoulders, like his father's," Lord Wrottesley told them. "He made his escape, but had to wait nine more years to be proclaimed King of England by Parliament. One

rather wonders what he thought while sitting up there. At any rate, he was through fighting against Cromwell."

It sounded so near, that long-ago period in history, here on the ground where the prince had been hurried to scramble up the great tree.

"Two hundred and two years ago, in this very tree!" exclaimed Diana, awed and delighted. "Virginia was just beginning, really! Even Williamsburg hadn't been built then."

The group laughed, and her father told her not to forget that there were many big plantations already in 1651, and that poor old Jamestown had been settled in 1607. "But," he added, turning to his host, "your story and this Royal Oak make one realize how very young our country is compared to yours, the mother country. We've had our fights, but I hope they're done with, for really, we're both old enough to know better by this time."

"I sincerely hope we do, and I really believe we do," Wrottesley answered.

To the regret of all the visit had to be brief, for Maury was due in Brussels for the opening of the Conference on August 23, and wanted to be there several days before that event to get settled and to meet Quetelet, with whom he had corresponded, and who had given considerable aid toward having the Conference called.

The little party crossed to Calais from Dover and then went on by train to the handsome city where the conferees were meeting. The summer was fair and not too warm, a pension was already prepared to receive them, and Maury was able to introduce his magpies to other young people, friends of the Quetelets, with whom they could amuse themselves and visit everything to be seen, of course properly chaperoned. With the girls happily

arranged for he devoted himself to the mission on which he had come.

At the first meeting of the Conference Maury was asked to direct the proceedings, but declined the honor. Quetelet then asked him to make the introductory speech, which he did in French, since that language was known to almost every member. The talk was short but it covered the purposes for which the Conference had been assembled, the first of its kind ever to come together, and it made vivid the advantages to the whole world which would become possible by the cooperation of the different nations in this research concerning the sea, this proposed united labor of all seafaring men for the good of all.

From then on meetings were held every weekday until the Conference broke up on September 8. There was no doubt whatever over the success of the affair. These scientists became enthusiastic as the plan grew definite and developed. Maury felt that high as his hopes had been, the actual results exceeded them. When, two years later, he wrote his Preface to the new book he had completed, *The Physical Geography of the Sea,* he expressed, as the following quotation shows, his deep satisfaction:

"Rarely before has there been such a sublime spectacle presented to the scientific world: all nations agreeing to unite and cooperate in carrying out one system of philosophical research with regard to the sea. Though they may be enemies in all else, here they are to be friends. Every ship that navigates the high seas with these charts and blank abstract logs on board may henceforth be regarded as a floating observatory, a temple of science. The instruments used by every cooperating vessel are to be compared with standards common to all; so that an observation which is made any where, on any ship, may be referred

to and compared with all similar observations by all other ships in all parts of the world."

The fame of the Conference spread widely, with the result that nations not represented at the conference became interested after the reports were published and began to join the parent body. Spain, Prussia, Sardinia, the Holy See, Chile, Austria, Brazil, even the Free City of Hamburg and the Republic of Bremen were members by 1855.

"Thus," remarks Maury, "the sea has been brought regularly within the domains of philosophical research, and crowded with observers."

But he does not add that all these thousands of observers, coming from so many parts of the world, owed their interest in and their opportunity to work for this new research to one man, himself. He it was who opened the book and translated its text and called to them; he whose tireless labor and eager curiosity had gathered together the fragments of this new science, scattered through forgotten pages in musty old tomes, because he knew it must exist, and that its usefulness was immense. From his first chart, dates that infinite pattern of sea lanes now used by the entire world; a fact recognized today by the Hydrographic Office of the Navy Department, which carries at the head of all its pilot charts this acknowledgment: *Founded upon the researches made and the data collected by Lieutenant M. F. Maury, U.S. Navy.*

The Conference over, Maury took his four magpies for a brief tour of France, Holland and Germany, where they saw the sights, visited the museums and galleries, and met a number of distinguished people, for Maury had been given letters to men of science in all these countries. Among these was Baron von Humboldt, the great German naturalist who had traveled over the greater part of the world, especially in South America, and

who had laid the broad bases of Physical Geography and Meteorology. Maury had studied the first part of his great work, *Cosmos,* two volumes of the five which made the complete series, the last not published until after Humboldt's death, had written his admiration of the books, and from then on the men had kept up a correspondence. Humboldt, living in Berlin, had begged the American to visit him; the meeting between the two increased their liking and respect for each other, and the old baron was complimentary and gallant to the four girls, who all liked him immensely, perhaps more so because they had expected him to be terrifying. He told them he envied them their approaching visit to France and Paris. They were sailing home from Le Havre.

"The happiest years of my life were spent in Paris. Berlin is an ugly place and most of the people in it are stupid persons," he told them. "It was only because the king insisted I should come here to his capital that I ever left Paris. You will love it, I know. I am an old man, and shall never see it again."

"We know we shall love Paris, and, when we get there, Baron, we will give it your good words as a greeting," Betty replied, smiling up into his face. The three other girls murmured a little chorus of assent.

"These young ladies of yours are very charming," Humboldt told Maury. "You were wise to marry young, and at times I regret that I never married, especially at times like these," and he patted Betty's shoulder.

The plan, already mentioned, in Maury's mind, toward which he had given some amount of study, to establish a meteorological system for the land as a help for farmers and agriculture, was greatly strengthened during the few days spent with the Baron, who was heartily in favor of it.

"The two, the sea and the land, belong together—weather is

as important to the one as to the other, and in both has its laws that should be thoroughly understood. You are the man, my dear friend, to spread that understanding, to bring it within the circle of the common man's grasp. I congratulate your country on possessing you."

"I wish some of our Congressmen back home felt that way." Maury laughed. "In that case I'd be sure of getting all the help I'll need."

Home again, after a pleasant crossing of the Atlantic on one of the lanes traced on a Maury chart. It was good to be back and good to be at work again. The family were all of them well, everything was marching along splendidly. By now the charts included Track Charts, Pilot Charts, Trade Wind Charts, Thermal Charts, Rain Charts, Storm Charts — and Whale Charts. The details on these aids to the sailor, sail where he might, at what month of the year he chose, were remarkable. The Track Charts covered the parts of the ocean most frequently used by shipping, giving the general types of weather and wind to be expected at any given season of the year in each particular locality. The Pilot Charts, divided into squares of fifteen degrees, showed in each square, for every one of the year's months, what general direction of the wind was to be expected for any given date. Endless reports had been studied on this subject. The Trade Wind Charts covered the regions, carefully outlined, where the trades blew, as well as those strange spaces where dead calms were to be looked for, with much added information. As for the Thermal Charts, a glance at one would give the navigator, by means of different colors and symbols, the temperature of the ocean water at or close to the surface for each month in so far as the information yet ran on that subject. The

Storm and Rain Charts, also measured in squares denoting five degrees, recorded the number of days in each month for each such square, compiled from a great number of observations, during which there was rain or fog or calm, what storms had come, whether lightning or merely wind and rain, with the direction of such winds and storms.

The Whale Charts were for the special use of those huntsmen of the seas who wrote a great story of their own and lighted the lamps on millions of tables after sunset darkened the sky. These told where the hunt had been most successful, whether this or another month were better in this or that locality, where the great creatures could be expected either in troops or singly, and which were the haunts of the different species, sperm or right whales.

One fascinating idea of Maury's was the fruit of his astronomical work. He published the first volume on astronomical observations which was ever issued from an American observatory in 1846, two years after he had been able to work at the National Observatory, and so excellent was this work that European astronomers conceded that the volume placed the American observatory in the front rank, gave it the right to stand beside the finest observatories of Europe. Maury had good men to help him, but it was he who was responsible and through whose hands every item passed for proof of accuracy. He loved astronomy, and wrote of it with that strain of poetry which is marked in all his writings not strictly confined to scientific notes. Many of his comments from the observatory notebooks have been published and make delightful reading. Following is a description of the passage of a star across the field of the telescope — well worth reading. It was part of a talk on *The National Observatory* given by Maury for the Virginia Historical Society.

"At the dead hour of the night, when the world is hushed in sleep and all is still; when there is not a sound to be heard save the dead beat escapement of the clock, counting with hollow voice the footsteps of time in his ceaseless round, I turn to the Ephemeris [the astronomical almanac] and find there, by calculation made years ago, that when that clock tells a certain hour, a star which I never saw will be in the field of the telescope for a moment, flit through, and then disappear. The instrument is set; — I look; the star, mute with eloquence that gathers sublimity from the silence of the night, comes smiling and dancing into the field, and at the instant predicted even to the fraction of a second it makes its transit and is gone! With emotions too deep for the organs of speech, the heart swells out with unutterable anthems; we then see that there is harmony in the heavens above; and though we cannot hear, we feel the 'music of the spheres.'"

Matthew would talk to his wife, to his children at home on such themes, making them live for them, giving beauty and color to what might have been mere dry facts. The universe was to him a constant wellspring of wonder and delight, governed by sublime laws. You could never know enough of it, never climb high enough to see any bounds. But that climbing, that farther seeing, that wider understanding, what happiness they were!

One hope the man had was to make a catalogue of the stars. He began this in 1845, as the *Washington Catalogue,* hoping to make of it a great contribution, worthy of his Nation and of the age, an age where so much was stirring in the broad fields of science. His plan was to cover the whole field of stars with telescopes, mark the position of each, with the nebulae, with the clusters, describe the colors and magnitudes — in fact, the whole picture of the visible universe revealed by the telescope. But the

work was too tremendous. The first volume appeared in 1846, the second in 1851, and another in 1873. The observations were far in advance of the publication, reaching 100,000 in 1855, because the intensely difficult and exact computations needed far more helpers than Maury could count upon. His mathematical assistants came and went, dwindled during the Mexican War; and his hydrographical and meteorological research and development came first.

Maury was a man who could have lived three lives, each full and interesting, each valuable. His family life was one; his practical work as a pathmaker of the seas and the first to press for what today is the Weather Service Bureau was another; and a third life could have been devoted to such remote yet fascinating knowledge as this of the stars. He had to do his best with the one life given him.

Early in 1854 Maury began writing his book, *The Physical Geography of the Sea,* a most delightful work drawn from several sources, and inspired by the advice of his old friends in the field of books, E. C. & J. Biddle of Philadelphia. These printers were bringing out the Sixth Edition of Maury's *Sailing Directions* at the end of 1853, after Maury's return from Brussels. In that edition was a long chapter headed by the above title.

When Dabney Maury, Matthew's nephew, went to see the Biddles for his uncle on some business concerned with the *Sailing Directions,* one of the firm told the young man that Maury ought to make a book out of the material in that one chapter.

"There's stuff for a splendid book here, and if your uncle doesn't copyright it under his own name, some Yankee bookmaker'll steal his thunder and make a fortune out of it."

Maury took the advice and with the help of the Biddles signed with Harper Brothers in New York for the publication of his book. He meant it to be his "greatest work," and he wasted

not a moment in beginning upon it. The hours used were at night, after he was through at the Observatory; and now, for the first time, he called his two eldest daughters in, each to help him at what, in those days, was called an amanuensis.

CHAPTER 10

His Great Book on the Sea

AS ALWAYS Maury wrote his *The Physical Geography of the Sea* right in the midst of the family, sitting at the marble-topped table in the middle of the room, as his daughter tells us in her memoirs, his papers spread out, the light from the hanging lamp shining on the bald spot on his head, entirely unaware of what was going on around him. "Let us play the piano, dance, romp, read aloud, he remained undisturbed, writing steadily, reading over what he had written, talking over it to himself, shaking his head."

Or else he would call one or the other of the two elder girls to take dictation for him. He would often keep both of them writing, scratching away with their porcupine-quill pens, one catching up on one subject, the other working on the next. "While this went on one or two or three of the younger children would climb up on the back rungs of his chair for the fun of curling his hair behind over one of the red or blue pencils he always used." Lost in his dictation, he noticed nothing.

He was a man who loved to play with his children. He always insisted he was the youngest in the family except the current baby. When he shaved in the morning he would place one of the smaller children on top of the bureau. Here it would gravely watch him, while the rest stood about, one with a towel, one ready to take the razor, or hand it to him, one or two more with the thin papers he used to wipe the blade. All watched eagerly as he made the lather in his shaving cup. Then, the

shaving over, he would brush his hair with two big brushes, asserting gravely "If I only used one at a time it would turn me round and round, like using one oar in a boat."

When he was at leisure he used to tell them yarns of the old days back in Tennessee with his brothers. They knew them by heart, they asked for them over and over, and should he tell some incident differently or leave something out, there would be a chorus of cries, setting him right. Again and again they laughed at, they applauded, the same special incidents.

And how they loved to go walking with him, good long walks into the country, gathering flowers or autumn leaves, nuts or berries or wild apples. When something wanted was out of reach, Father would find a slim, pliable branch with a crook at its end, or a notch where another branch had grown, and with it twist off the desired nuts or apples. What laughter, what fun!

Happy and proud were Betty and Curly when they were actually invited to help their father in his writing. They had, since they were thirteen and fifteen, assisted him in teaching the younger children. The boys, as they grew to be eight or nine, went to school, but the girls, except for very brief interludes, were taught at home. Their father's custom was to begin the lessons with Betty and Curly at breakfast, which was a good substantial meal.

"Tell me about the lesson," he would say. He did not want them to recite by rote, nor did he question them much and, when he did, never in the words of their books. Breakfast over, and, when both girls had finished their little expositions in their own words, he would take the lesson as a text on which to make a talk, engaging, often amusing, always illuminating, linking what was being studied with allied themes. It was a marvelous method of instruction, nothing dead or formal, all fresh

and vigorous, a flowering of the study hours. Those hours were early in the evening or late afternoon, left to the girls' own judgment. They must know their lesson, that was all, and be able, in their own words, to prove they knew it. Later in the evening they always joined their father and mother in the parlor; usually there would be a visitor or two, among the most distinguished men and women of the times. Maury always insisted that meeting these persons, hearing them, joining in the conversation, was as valuable a part of education as anything else, perhaps, indeed, the most valuable.

In that famous sixth edition of *Sailing Directions* Maury had close to a hundred pages under the title now adopted for the new book. This title had been suggested in one of Baron Humboldt's letters to the author as a fit one for a new branch of ocean science, for which, he declared, Maury had the material. In his Introduction to the first edition—there were eight American editions in all, the final one appearing in that fateful year, 1861 — Maury indicates the scope of his book and the meaning of the title in these words:

"Under this term will be included a philosophical account of the winds and currents of the sea; of the circulation of the atmosphere and ocean; of the temperature and depth of the sea; of the wonders that lie hidden in its depths; and of the phenomena that display themselves on its surface. In short, I shall treat of the economy of the sea and its adaptations — of its salts, its waters, its climates and its inhabitants, and of whatever there may be of general interest in its commercial uses or industrial pursuits, for all such things pertain to its Physical Geography."

He adds that his aim is to present his material "in a manner that may be interesting and instructive to all, whether old or young, ashore or afloat, who desire a closer look into the won-

ders of the great deep, or a better knowledge as to its winds, its adaptations, or its Physical Geography."

That Maury made mistakes in some of his conclusions or suggestions as to the exact cause and working of the phenomena on which he wrote is scarcely surprising considering that the book is a pioneer work. What is more, deep-sea soundings had not before been successfully made. It appeared to be impossible to get to the bottom of the sea or, at any rate, to know when you reached it once you tried to plumb away from the shores in blue water. It was the solving of this problem that, added to his discoveries in regard to the winds and currents of the sea, gives him the right to be named the first great oceanographer the world had yet seen. Until his plan for deep-sea soundings was used by the Navy, "the bottom of what sailors call 'blue water,'" Maury writes, "was as unknown to us as is the interior of any of the planets of our system."

Not that attempts to sound the depths had not been made, especially by officers of the English, French and Dutch nations, the great sea-going peoples. Some had tried coarse hemp threads twisted together, some silk threads, others the usual lead and line. The natural but erroneous idea being that, when the weight reached bottom, the line would become slack and cease to run out, and probably a shock would also be felt.

But the shock was evidently lost way, way down; and the deep under-currents of the sea kept hauling out the line after the lead sat down on the job. As this became evident it was realized that the depths shown, beyond the eight- or ten-thousand-foot limit, could not be in the least trusted.

The more the difficulty was realized, the more wonderful became the methods used to beat "ole debbil sea." They exploded petards, they let down bells when the sea was quiet and everything still. The idea behind these experiments was that these

petards, so made that they would explode on touching bottom, those bells which should be made to toll once the tricky line had brought them to the floor, would send an echo up that, measured by the rate at which sound travels in water, would give the distance. But never an echo rose from the deep with its message. Then John Ericsson and some others among the experimenters used deep-sea leads that had been so constructed that they held a column of air in their hearts, which, when the water exerted its pressure would be compressed, and so show the depth where this had occurred. So it did when the depth was not too great, but where the pressure became really interesting, the instrument was crushed.

Maury and a Mr. Bauer, a New York mechanician, got together and Mr. Bauer made a deep-sea sounding apparatus according to the pattern Maury had worked out. He describes it thus: "To the lead was attached, upon the principle of the screw propeller, a small piece of clockwork for registering the number of revolutions made by the little screw during the descent; and, it having been ascertained that the apparatus, in descending, would cause the propeller to make one revolution for every fathom (six feet) of perpendicular descent, hands provided with the power of self-registration were attached to a dial, and the instrument was complete. It worked beautifully in moderate depths, but failed in blue water, from the difficulty of hauling it up if the line used were small, and from the difficulty of getting it down if the line used were large enough to give the requisite strength for hauling it up.

There were other proposals, but too involved to be practical, one being that a magnetic telegraph wire, properly coated, should be laid up in the sounding line, while to the lead, machinery was attached, which, at each increase of a hundred fathoms, aided by the additional pressure, would have the circuit restored

and send up a message saying how many hundred fathoms the plummet had sunk.

Failure followed failure, but hope and trial persisted. "Greater problems than deep-sea soundings had been overcome in other departments of physical research. . . Astronomers had measured the volumes and weighed the masses of the most distant planets. . . Was it creditable to the age that the depths of the sea should remain in the category of an unsolved problem? Its 'ooze and bottom' was a sealed volume, rich with ancient and eloquent legends. . . The seal which covered it was of rolling waves many thousands of feet in thickness. Could it not be broken?" So questions Maury.

He answered after much work and many experiments. But the materials used were the first, the simplest — line and sinker. A small but strong line, capable of bearing the weight of 60 pounds or more when freely hung in the air, a lead of the same shape and weight to be used in all the experiments. The lead was let down from a boat, not from the ship, so that the oarsmen could hold the line perpendicular. And by the experiments made the law of descent for that type of line and weight was reached, the rate decreasing in speed from 2 minutes, 21 seconds at 4 to 500 fathoms, to 4 minutes, 29 seconds from 1800 to 1900 fathoms.

With this law to guide them it was possible to tell very closely when the weight ceased to descend, and the line began running out on the current; for the currents swept the line onward at a uniform rate of speed, instead of the decreasing rate of speed the weight — a cannon ball — had maintained.

So that problem was solved. Another remained. How to bring up specimens of the ooze or whatever it might be, down at the bottom. And again this problem was solved in the Observatory. Passed Midshipman J. M. Brooke, U.S.N. was associ-

ated in these researches with Maury. He proposed a contraption by means of which the shot was detached on striking bottom, and in the cup at the lower end of the rod running through the shot, adhering to a smear of tallow, specimens of the ooze were hauled up. With this ingenious contrivance the men working for Maury were able to bring up stuff from a depth of two miles and more. Later the barrel of an ordinary quill fitted into the rod was found to work better.

At long last, then, the problem was solved. Distances from the surface to the floor of the sea could be successfully measured, and the character of the oozy bottom studied. When that first tiny specimen was hauled to the surface there must have been a thrill of triumph. Once again man had conquered the resistance of nature, had done what had seemed the impossible.

The officers working for Superintendent Maury commanded three small vessels detached to serve the Observatory in the winds-and-currents work, and later in the deep-sea soundings. The first vessel was the *Taney,* a schooner commanded by Lieutenant J. C. Walsh, which began soundings in the latter part of 1849 without much result, as the ship had to be brought back to port, having been proved unseaworthy. The sloop-of-war *Albany* under Captain Charles T. Platt, and especially the brig *Dolphin,* under Lieutenant O. H. Berryman, working with the Brooke's Deep-sea Sounding Apparatus, as it was named by the Navy, brought back the bacon. Work went on steadily and, by the end of 1853, Maury had enough material for his Deep-Sea chapter in *Sailing Directions.*

It was Berryman who brought up the first specimens from sea bottom at a depth of more than two miles. He and his officers thought the stuff was clay, but they packed all they collected with great care, labeling the different hauls. The tallow used at first had been discarded and the stuff was brought up clean,

ready for the microscope. Maury sent the specimens to Professor Bailey, of West Point, an eminent microscopist, who was delighted to examine them. In his letter to Maury he writes: "I find that *all* of these deep soundings are filled with microscopic shells; not a particle of sand or gravel exists in them . . . it is not probable that these animals lived at the depths where these shells were found, but I rather think that they inhabit the waters near the surface; and when they die, their shells settle to the bottom."

Professor Bailey had also received bottles of water brought up by the *Dolphin* from various depths, which he was going to examine. He asked that as many ships as possible collect soundings with Brooke's apparatus in all parts of the world, "so that we can map out the animalculi as you have the whales."

Maury comments on these results amusingly: " 'What is to be the use of these deep-sea soundings?' is a question that often occurs; and it is as difficult to be answered in categorical terms as Franklin's question, 'What is the use of a new-born babe?' Every physical fact, every feature of the earth, the work of any and all of those agents which make the face of the world what it is, is interesting and instructive. Until we get hold of a group of physical facts, we do not know what practical bearings they may have. . . Already we are obtaining practical answers to this question as to the use of deep-sea soundings; for as soon as they were announced to the public, they forthwith assumed a practical bearing in the minds of men with regard to the question of a submarine telegraph across the Atlantic."

For the soundings had proved the existence between Cape Race in Newfoundland and Cape Clear in Ireland of what Maury calls "a remarkable steppe, which is already known as the telegraphic plateau." Cyrus Field and his company of experts were pledged at the time Maury's book was written, by

contract with an English firm, to deliver the completed cable by June, 1858, stretching along this steppe or plateau. Field's company had already lost one cable which they had attempted to stretch between Port au Basque, Newfoundland, to Cape Breton, Nova Scotia, but they looked for better luck this time.

But Maury, in his great book on the sea, did not confine himself to this new and deeply interesting phase of sea exploration. His opening chapter was on the Gulf Stream, and in the second the Stream's effect on climate is discussed. The opening paragraphs are a delightful example of Maury's style, of his hooking up the small with the great, the familiar with the unknown. Says he:

"Modern ingenuity has suggested a beautiful mode of warming houses in winter. It is done by means of hot water. The furnace and the caldron are sometimes placed at a distance from the apartments to be warmed. It is so at the Observatory. In this case pipes are used to conduct the heated water from the caldron under the superintendent's dwelling, over into one of the basement rooms of the Observatory, a distance of one hundred feet. These pipes are then flared out so as to present a large cooling surface; after which they are united into one again, through which the water, being now cooled, returns of its own accord to the caldron. Thus cool water is returning all the time and flowing in at the bottom of the caldron, while hot water is continually flowing out at the top.

"The ventilation of the Observatory is so arranged that the circulation of the atmosphere through it is led from this basement room where the pipes are, to all other parts of the building, and in the process of this circulation the warmth conveyed by the water to the basement is taken thence by the air and distributed over all the rooms. Now, to compare small things with great, we have, in the warm waters which are confined in

the Gulf of Mexico, just such a heating apparatus for Great Britain, the North Atlantic and Western Europe. The furnace is in the torrid zone; the Mexican Gulf and Caribbean are the caldron; the Gulf Stream is the conducting pipe. From the Grand Banks of Newfoundland to the shores of Europe is the basement — the hot-air chamber — in which this pipe is flared out so as to present a large cooling surface. Here the circulation of the atmosphere is arranged by nature, and it is such that the warmth thus conveyed into this warm-air chamber of mid-ocean is taken up by the genial west winds and dispensed, in the most benign manner, throughout Great Britain and the west of Europe."

There is a chapter on the "Atmosphere," on "Land and Sea Breezes," one on the "Red Fog and Sea Dust." There is a fascinating one on the "Open Sea in the Arctic Ocean" and another on the "Equatorial Cloud-Ring." Eighteen in all, excluding a final word on the Brussel's Conference and directions as to obtaining Maury Charts, with a note on the Abstract Charts, of which there were two forms: one, the more elaborate, for men-of-war, the other for merchantmen. There is also in this final chapter a plea for strict accuracy in the observations made, with exactly what to do to have the errors in the instruments used compared with standard instruments so that they can be accurately determined.

The book when it appeared was received with high praise. There were some who dissented from Maury's conclusions, and time has made obsolete some of the opinions he formed on his data. The Gulf Stream is now stated to be, as Sir William A. Herdman writes in his *Founders of Oceanography,* not an independent phenomenon, but a part of the general system of surface circulation of the ocean, a system in which the currents, diverted to the east as a result of the rotation of the earth, in their course

northward from the equator, flow clockwise in the North Atlantic around a central relatively calm area, the Sargasso Sea, in which seaweeds and other floating objects accumulate. But that does not alter the truth, nor the beauty, of Maury's opening description of the great current: "There is a river in the ocean. In the severest droughts it never fails, and in the mightiest floods it never overflows. Its banks and its bottom are of cold water, while its current is of warm. The Gulf of Mexico is its fountain, and its mouth is in the Arctic Seas. It is the Gulf Stream. There is in the world no other such majestic flow of waters. Its current is more rapid than the Mississippi or the Amazon, and its volume more than a thousand times greater."

The book became a best seller in America and abroad. It was translated into most European languages. It is still a valuable work of scientific fact and observation, and it is the first work of its kind and scope ever to have been written. You can hardly open it anywhere without being fascinated, without discovering something you are glad to know.

And yet, the year after its publication, Maury was given a stab in the back by men of his own profession, and brought almost to ruin.

CHAPTER II

A Stab in the Back

ON FEBRUARY 28, 1855, a special Act was passed by both the Senate and the House "to promote the efficiency of the Navy," surely a laudable purpose, for there was much dead wood in the Service, its methods of promotion were absurd, and other items of non-efficiency could be improved by overhauling.

To do this job the President, Franklin Pierce, directed the assembling of a Board of Naval Officers, to consist of five captains, five commanders, five lieutenants. The Board was ordered to "make a careful examination" of the personnel of the Navy and to report upon those officers who should be found "incapable of performing promptly and efficiently all their duty both ashore and afloat."

According to the degree of this incapacity the officers so reported were either to be dropped, or to be placed on a Reserved List. Those on this List were to receive either leave-of-absence pay or furlough pay, according to the status given them in the report, were to be ineligible to promotion, but subject to be called for duty by the Navy Department. The first meeting was held on June 10, and with the exception of the intervening Sundays and the Glorious Fourth, the Board was supposed to meet daily until July 25. On the following day it handed in its report. In those thirty-odd working days it pretended to have made "a careful examination" of the personnel of the Navy, and particularly of the qualifications of the men judged to be incapable of performing their duties — seventy-one being placed on leave-

of-pay list, eighty-one on the furlough-pay list, and forty-nine dropped from the Navy.

The Board was made up of an utterly undistinguished group, some of them old fogies to whom the very phrase "science in the Navy," was like a red rag to a bull. On the other hand the youngest man on the Board had three hundred and sixty-two officers above him in rank, three hundred and twenty-two below him. Each officer to be retired, who stood higher in rank than the men on the Board, would give them one or more step-ups, those below, of course, not affecting their standing. Of the higher list a hundred and thirty-eight were retired or kicked out, of the lower forty-six. In addition the meetings were held in secret and no records were kept. Also, some of the supposedly daily meetings were called off because of absentees, leaving an entire working time of one hundred and forty hours, since sessions began at 10 A.M. and ended at 3 P.M. The *Scientific American,* for November, 1855, supplied the above data, judging that the "careful examinations" must have averaged about ten minutes per man examined. Moreover, no witnesses were called, no arguments heard.

On this list, as one of the officers in the Navy incapable of performing his duties efficiently, was the name of Matthew Fontaine Maury.

It had its funny aspect.

His book had been out about a year. The name of the National Observatory of the United States had become, because of his leadership and genius, one of the most highly honored in the world. His charts and sailing directions were considered part of the necessary equipment of ships of many nations, and, not least, of his own Navy. He had saved his country millions of dollars through his shortening of the time between port and port in the Atlantic and the Pacific. In the review of *The Physical*

Geography of the Sea, Blackwood's great *Edinburgh Review* had called attention to "the good that Maury has done in awakening the powers of observation of the officers of the Royal and mercantile navies of England and America," pronouncing them as "incalculable." This, as part of a most laudatory review of the book as a whole. Humboldt called the book "epoch-making," while a French scientist, Jomard, praised its value to scientists as well as to navigation, and spoke of the success with which a "work so difficult, so useful and so laborious," had been carried through. Many scientific societies of the highest standing were proud to make him an honorary member; gold medals had been sent him from various foreign governments. In January of this very year, 1855, the Senate had gone so far as to suggest concrete recompense, to the amount of $25,000, as a token of the money saved the country by Maury, although in true senatorial manner it got no farther. Also, in this year, Secretary of the Navy Dobbin made a report on the *Winds and Currents* work of Maury in which he said:

"Gratifying evidences of the high estimation in which the labors of the Naval Observatory are held at home and abroad continue to be received. Several new sheets of the Wind and Current Charts, and an enlarged edition of the Sailing Directions have been published this year. The usefulness of this work expands with its enlargement. . . It is earnestly suggested by Lt. Maury that this system of meteorological research, if extended to the land, would afford for the agricultural interests of the country, and for science too, results quite as important as those which commerce and navigation have received from it." It was this year, too, that saw the Charts extended to cover the Indian ocean.

As far back as 1847 the University of California had conferred upon Maury an honorary degree of A.M. and, in 1852, of LL.D.

In 1854 Columbia University conferred that same degree on him, and better still the Merchants and Underwriters of New York, in recognition of what he had done in the way of service for that port, had presented him the year before with a fine silver service and a purse of $5000. To show what the merchant marine thought of him, the ship builders, A. A. Low & Bros., also of New York, named one of their fine clipper ships after him. And all these marks of recognition and esteem were but the beginning of the long list of honors to be bestowed upon him.

Maury was not in Washington when the gentlemen who conducted their Star Chamber investigation were in session. He had been invited, with his wife and two elder daughters, to sail with Mr. Field to see the laying of that first cable between Newfoundland and Cape Breton which ended unhappily. Field at the same time promised that the National Observatory should be given priority in the use of the telegraph to determine longitude across the Atlantic, as part of his appreciation for the help Maury was giving to "illuminating the path for the lightning."

Maury also carried on a tremendous correspondence between captains of vessels regarding the abstract logs, or asking information and advice about strange phenomena observed at sea, giving his personal attention to these letters. His, too, were the annual reports, clearly and vividly written, concerning his activities, one to the Secretary of the Navy, a second to the Chief of the Bureau of Ordnance and Hydrography. The problems of administration of the Observatory were in his hands, including the purchase of needed material or instruments. It was his job, too, to superintend the keeping up of the grounds and the buildings, and to write reports on these matters. He had to manage the personnel of the Observatory, to receive and fit into its working corps new arrivals, come to replace officers who were called away on other duty, and to meet distinguished visitors, Ameri-

can or foreign, who came to inspect the great telescope or other parts of the scientific setup.

The success of his management, his insistence on acquiring only the best equipment, and the work done at the Observatory, had succeeded in little more than a decade in making it the second in the world, starting practically from scratch. Of course work on the *Sailing Directions* and *Charts* went on continuously, and there were other things to see to, such as the rating of chronometers and the preparation of the *Nautical Almanac*.

His astronomical labors had to be rated second to the seas and winds work, and the mapping of sea lanes, but were carried on with enthusiasm — and results. Maury wrote the French astronomer, Leverrier, Head of the Paris Observatory, whom he knew, in regard to Leverrier's discovery of the planet Neptune, made in 1846. The work on the *Catalogue of the Stars* was going on, and Maury felt certain that some older astronomer must have entered it as a fixed star. So he set Sears Cook Walker, one of his assistants, to trace the path of the planet backward, and sure enough, after a year's work, Neptune was finally discovered to have been entered by the French astronomer, Lalande, in 1795, as a fixed star. But Neptune had departed from that point in the heavens where Lalande had placed it, in his list of fourteen stars, gone its way, and been lost until Leverrier caught it and knew it for the planet it is.

This but briefly sketches the immense amount of work Maury had been carrying on since his appointment to the post of Superintendent.

It was not until September 17 that Maury received notice from the Secretary of the Navy, Dobbin, that his name had been placed on the reserved list on leave-of-absence pay, but that he was to continue as Superintendent of the Observatory.

This was lightning out of what, for quite some time, had

looked like a clear sky. Maury was as angry as any self-respecting man would be at such an insult to an honorable and hard-working career in the service of his profession and his country. To have kept such a man in the grade of lieutenant was in itself a shameful procedure, with the rest of the world doing its best to honor him. But to proclaim him unfit and inefficient in addition was too much. Maury wrote the Secretary immediately:

"This announcement has taken me by surprise. I have been in the navy upwards of thirty years. During this time I have aimed in every station to which I have been called to serve my country truly and well, with what success the Department and the public can judge better than I. Suffice it to say that I am not aware that any charges or accusations or even complaint of duty neglected or badly performed has ever reached the Department against me. Nevertheless in the judgment of the Board I should be and have been placed under official disgrace. This is a severe blow and I feel it as a grievous wrong. May I not therefore be permitted to know what is the accusation against me, and who my accusers were before the Board?"

To which the Secretary merely replied that according to the law — one can but wonder what law — the Board simply gave names and ranks, but assigned no reasons for its convictions. As to its own names, however, one may note that they were kept secret!

At any rate, the newspapers of the country boiled as soon as the facts came out. The names of the men who formed the Board could not remain hidden, and, as for the excuse given by several among them that Maury was lame and could not be put on sea duty, Maury was only slightly lame, his leg completely healed. As he remarked, one member of the Board had broken his leg twice and several officers, who had not been stygmatized, both above and below Maury as to age and rank, were crippled.

As soon as Maury knew who his detractors were he wrote a personal letter to each one of them in which he put the following questions: "1st, What was the process of examination adopted by the Board for ascertaining whether an officer were efficient or not; 2d, What was the standard of efficiency for the grade of lieutenant; 3d, What difference if any did the Board make between duty ashore and duty afloat; 4th, Wherein was I found incapable of performing the duties of my office, rank or grade; 5th, Did the Board inspect the Observatory or make other examination as to the manner in which it is conducted; 6th, What was the character of the evidence upon which the Board pronounced its findings against me?"

The replies received generally made no direct answers, shirked the issues, dodged the point, were usually so brief as to be practically non-existent. The youngest member, Lieutenant Biddle, wrote that he was led to believe that the accident to Maury's leg unfitted him for sea duty, and that was why he voted against him, adding the naïve remark that every officer ought to be fit for "the most unpleasant duty in the navy, service afloat," while he was given the impression that Maury shirked it because he preferred "scientific distinction." Some of the old seadogs ought to have been heard to snort at the young gentleman's opinion of sea duty.

Among the fifteen members of the Board there was just one, Captain Matthew C. Perry, who made a mark of his own on the Navy and whose name could have been recognized outside of the Service. Captain Perry had, on March 31, 1854, finished negotiating the treaty with Japan, which had been proclaimed, after ratification on February 21, this year of 1855, in June. One wonders what he would think of that today.

Perry wrote in reply to Maury's questions to this effect:

"In justice to those who have been affected by the action of

the Board, I cannot but hope that steps may soon be taken by the proper authorities to develop the causes and explain the circumstances which have brought about this painful change in our common service," which hints that the Captain did not at all care for the Board and its methods.

But the newspapers were not under the necessity of avoiding criticism either of the Government or the Navy.

The New York *Journal of Commerce* came out with this considered editorial:

"Lord Nelson lost both an eye and an arm, yet his name was mighty in battle. Our officers have lost neither arms nor eyes, it is true; but they stand on the records of their country disgraced. Although Messrs. Mallory and Clayton deny that any action of the Senate can wipe this disgrace off, we beg to differ. Let these officers be restored to their former positions, and then if any charges rest against them on the records of the Navy Department, let them be tried and, if found guilty, condemned. But it is absurd to believe that fifty percent of the Navy have been for years inefficient, immoral and worthless. And if fifteen officers of the Navy decide that one-half are unfit for active service, it is more than probable that the other half is no better. . . We ask by what rule was this Board selected? Did *they* pass the ordeal of a secret inquisition? Or have they since their appointment passed another 'careful examination' by a Board?"

The New York *Herald* was even more biting:

"We understand there is now in press and will shortly appear, a history of the lives and eminent services of the late Retiring Board, entitled 'Lights and Shadows of the Fifteen.' It will embrace all the shades in the lives of those fifteen Spartans, from their entrance into the Service up to their 'Thermopylae defeat' of two hundred and one brothers-in-arms, by which gallant ac-

tion they 'promoted' themselves. It will be the commencement of a new epoch in the naval history of the country, and will be rich, racy and spicy."

Washington's *National Intelligencer* was another leader of the Press who came in on Maury's side: "In the case of Lieutenant Maury all right-minded men, without respect to party, *have spoken,* and unanimously said, 'Let this sword be restored to him with all the honors and reparation due to injured merit.' Let this be done, and done quickly."

The *Scientific American* quoted the Philadelphia *Inquirer* in terming the action of the Board "An insult upon the virtue and general intelligence of the country," and then went on to say that Maury's "eminent services have been acknowledged by almost every Government in Europe. Prussia and Sweden have struck gold medals in his honor. The Russian Ambassador had publicly thanked him by the direction of his government. [On this occasion the Ambassador handed Maury an autograph letter from the Grand Duke Constantine, Commander-in-Chief of the Russian Navy, which concluded "In my official capacity, I may say to you that you do honour to the profession to which you belong, as well as to the great nation which you have the honor to serve. . ."] England has not been sparing of her tribute of admiration in Parliament, and has adopted his plans in her own navy, while the great French Industrial Exhibition awards to his charts her highest premiums. His own country, on the contrary, declares him a clog and an incumbrance on its navy and unworthy of promotion. We trust Congress will set this matter right. Better dispense with the services of the entire Board of 'ten minutes inquisitors' than of this eminent man. We understand that it has been proposed in Philadelphia, in case Lieutenant Maury retired from the Observatory, to present

him with a testimonial of $50,000 as an acknowledgment of his services."

The excuse Biddle had offered for voting against Maury, that he had been told the accident the Lieutenant had suffered to his leg "unfitted him for sea-duty," together with his having received the impression that Maury shirked that duty because he preferred "scientific distinction," rather cancel each other out. As to the least attempt to discover what it was that Maury was really doing, and what worth it had, never a word seems to have been spoken. The fact was, and well Maury knew it, that a certain proportion of men in the Navy were frantically jealous of his renown. A proportion, probably a large one, of these men were on the Board, and they saw a chance of humiliating him, of putting an end to his career, which they were glad to snatch at.

Aside from writing to the three past Secretaries of the Navy within his reach asking them to do him "the favor to state, why, when you were Secretary of the Navy, you did not order me to sea? Was it because I did not apply, or was it because you considered my services on shore of more value to the country than they would have been at sea?" Maury made no further attempts toward justification. All three Secretaries, Graham, Preston and Kennedy, wrote that it was his value in the work he was doing which had caused them to keep him ashore and at work in the Observatory. Graham wrote that "I doubt whether the triumphs of navigation and of the knowledge of the sea achieved under your superintendence . . . will not contribute as much to an effective Naval Service and to the national fame as the brilliant trophies of our arms." Kennedy, after writing that he could not recollect, after the lapse of time, whether or not Maury had applied for sea duty, went on to say "From my knowledge of the nature of your scientific pursuits, their useful-

ness to the country and your devotion to them, I can say that nothing but such an emergency as left me no alternative would have induced me to withdraw you from your labors at the Observatory to go to sea." Preston was even more explicit. After remarking on the fact that the post Maury occupied "is one of the highest importance and interest to the Naval Service of the United States (and) not only to the Navy but to the entire commercial interests of the country," he declares that the Superintendent should possess "the acquirements, habits and tastes of the scholar and man of science, as well as those of the officer and seaman. I found you in the office, familiar with its duties, and fulfilling the duties assigned you with constantly increasing labor, enthusiasm and success, in the midst of investigations that then promised, and they have since conferred, great practical benefit on the service to which you belong, and lasting honor on the country and age in which you live. . . On no duty, whether ashore or afloat could your services have been as valuable to the country, or as distinguishing and honorable to your profession. . ."

Congress was forced to take action by the newspapers and the general anger shown over the country, as well as such Acts as the Resolutions in favor of the restoration of Maury to the active service list, passed by legislatures of seven states, Tennessee, Alabama, Louisiana, Maryland, Virginia, New Jersey and New York. Maury was deeply touched by these testimonials of the feeling of the people. Writing in regard to New York he says "These resolutions uttered by a great state in the manner of a free people have a charm that is lacking in these honors which, in the shape of medals, orders of knighthood, crosses and decorations, have been conferred by the hands of strangers."

Meanwhile petitions were being presented by Senators for nearly a hundred of the officers the Board had pronounced unfit.

Senator Bell of Tennessee, on January 21, 1856, presented the appeal on behalf of Maury. Already the President and the Secretary of the Navy had expressed their opinion that he had been badly treated. On the whole, this opinion appeared to be practically unanimous outside the limits of the Board and a few members of Congress. And how they talked and jabbered. Many months were required by these astute gentlemen to talk themselves out, but at long last the Senate Committee on Naval Affairs reported a bill to amend the Act to Promote the Efficiency of the Navy, providing that any officer injured by the action of the Retiring Board could secure an investigation into his fitness for the Service, by a regular court of inquiry, whose findings would be submitted to the President for action.

One of the bitterest opponents to Maury's restoration to active service was a certain Senator Mallory from Florida. A peculiar person, but one whose type is not unknown in the Capitol. This Mallory, early in 1855, as Chairman of the Senate Committee on Naval Affairs, had gone to bat for Maury. He had poured out a stream of eloquence relating to the work Maury had done and was doing. He had declared in ringing tones that the officer deserved recognition for the value of his services, that he had a family to support, that his pay was only $3500, and that "Your Committee think that a sum of money, insignificant indeed in comparison to his services, yet sufficient to remove his anxieties and to cheer his hopes for the future of those dependent upon him, might be justly bestowed. Your Committee recommend that a sum of $25,000 be thus appropriated, and report a bill accordingly." This was the suggestion already mentioned, which resulted in nothing.

Yet, a year later, nothing having altered the value of the work Maury was doing or had done, Mallory was one of the small group of senators, including Clayton of Delaware, Benjamin of

Louisiana and Jefferson Davis of Mississippi, who violently opposed Maury's restitution, Mallory even declaring "If the Board has erred in any case whatever, there was no error in the case of Lieutenant Maury." The reason for this about-face, aside from Mallory's own character, was that the bill, which resulted in the appointment of the Board, had been the creation of himself and Senator Davis, and that it was Maury's high standing, and his wide championship throughout the country, which had brought the Board into disrepute.

However, when the Amendment was passed, January 16, 1857, the agile Mallory made another handspring. There was in the new bill a section calling for the organization of a scientific corps to consist of one captain, two commanders, ten lieutenants and seven masters. Mallory came out for this plan, which was all right; but he also rose to tell the Senate that his Committee "had an earnest desire that that distinguished officer should be at the head of the corps," the officer being none other than Lieutenant Maury. In the final writing of the bill this plan was dropped, and matters at the Observatory remained as they were, to Maury's own satisfaction.

After the Civil War broke, Mallory became Secretary of the Navy under ex-Senator Jefferson Davis, when Davis was made President of the Confederate States. He did all he could to hamper Maury in that position.

Maury's case finally came up before the court of inquiry. A surgeon testified that his leg was perfectly able to resist any calls sea duty might make upon it, and furthermore that it was stronger than the one owned by Missroon, the member of the Board who had broken his limb twice. As to refusals by Maury of duty at sea, or any shirking of that duty, the testimony of the different Secretaries of the Navy scotched that lie. It was also proved that he had made a particular request during the Mexi-

can War for such duty, and been refused. In addition it was pointed out that there were a number of officers whom the Board had not pronounced unfit who had served a far larger proportion of shore duty than he.

The result was not only Maury's complete vindication, restoring him to the active list, but his promotion to the rank of Commander. The announcement was sent to Maury on January 27, 1858, the promotion to date from September 14, 1855, three years less three days since the announcement of his retirement had been received.

Maury's reply was brief:

"Sir: I have the honor to acknowledge the receipt of your communication of the 29th ultimo, enclosing a commission making me a Commander in the Navy from the 14th day of September, 1855. Respectfully, etc. M. F. Maury, Commander, U.S.N. To Hon. Isaac Toncey, Secretary of the Navy."

CHAPTER 12

Carrying On

HIS TREATMENT by the Retiring Board did not halt Maury in his work. He continued exactly as though nothing whatever had occurred, despite a deep feeling of bitterness hardly to be wondered at. He wrote to his relatives something of this feeling, but he did not press it. Thoroughly occupied with work he loved, in his home he found peace and loving-kindness. Now and again he had the joy of receiving a letter from some naval officer with words of admiration and encouragement, of thanks for what he had done for the Service. He began to realize that the right men were with him, which was what mattered most. Now that his name was cleared of any stigma and he was recognized by his Government by being promoted to a higher rank, he dropped the whole thing out of his mind.

In September, 1857, a few months before Maury's complete vindication was made known, he suffered a great personal loss. Commander William Lewis Herndon, his wife's brother, who was a few years younger than Matthew, a mere lad when the two first met on the long-ago visit Maury had made on his first journey from Tennessee, was drowned when his ship foundered in a great storm off Hatteras. The two loved each other like brothers, and Herndon never missed a chance to visit the Maurys whenever he had leave. A tall, handsome, sunny-tempered man, the children adored him, and would insist on his spinning sea yarns for them, yarns that used to make their father shout with laughter.

A famous expedition made by Herndon in 1851–52 was the fruit of an idea of his brother-in-law's, which he pressed in articles and talks with influential persons. In a letter Maury wrote his cousin, Mrs. Blackwood, in regard to the slave trade which England was already fighting, and which the United States had recently begun to fight, he mentions an article of his protesting against Britain's claim of the "Right of Search," over all vessels leaving the African coast, and suggesting this idea:

"If you will read my article published in the *Southern Literary Messenger* against the 'Right of Search,' which article was sent in the proof-sheets to Lord Ashburton, and commended to him as containing a plan which if carried out would be most effective in breaking up the slave-trade . . . you will see that my plan was adopted exactly as I proposed it, and we now have a squadron on the coast of Africa for the suppression of the slave-trade.

"Now for the last two years I have been urging upon the Government to make a treaty with Brazil, and to remind her that in that treaty we are her best customers for coffee. That nearly all she produces is consumed in the United States, where it is admitted duty free. . . I have urged that we should say to Brazil in that treaty, Stop the African slave-trade, or we will put a duty on that coffee, and thus lessen the demand. . . Brazil is a slave country and if (her people) cannot get them in one way they will in another. The alternative is, shall Amazonia be supplied with this class from the United States or from Africa? In the former case it will be a transfer of the place of servitude, but the making of no new slaves . . . (and) it would be relieving our own country of the slaves, it would be hastening the time of our deliverance . . . putting off indefinitely the horrors of that war of races which, without an escape, is surely to come upon us."

Maury's idea, in short, was to pour the excess Negro population of the South into Brazil, or more particularly that part of

Brazil he calls Amazonia. He knew that many leading Southerners were already talking of being possibly "compelled to conquer parts of Mexico and Central America and make slave territory" of that which was free. Such a conception sounds strangely in our ears today. But the South was getting to the point where she foresaw that the Negroes would outnumber the whites in an increasing ratio as the years went on.

So it was that Lieutenant Herndon was sent to explore the great river, which Brazil kept closed to the merchant ships of all countries, and which lay as unknown as mid-Africa. He returned in 1852 full of enthusiasm for the vast possibilities both for mineral and agricultural development, making his report to Congress in January, 1853, and next year publishing a book, *The Amazon,* crammed with information. He and Matthew discussed the voyage and its results with enthusiasm.

"It's only the blacks who can work in these tropic forests without dying of fevers," Herndon said. "Some plantations are doing magnificently. But there's a world of untouched wealth there, which can be developed quite as much to Brazil's profit, more indeed, than to the rest of the world. And the great river is a wonderful highway, made to order, one might say."

In that year, 1853, Matthew wrote seven articles over the pseudonym "Inca" for two publications, the *National Intelligencer* and the *Union,* of Washington, in which he dwelt on the vast resources in the Amazon country, and demanded the free navigation of that stream. They roused wide comment, and in June, at the Memphis Convention, a *Resolution* was passed adopting Maury's suggestions [there was no secret as to his being the author of the papers] this resolution being submitted to the House of Representatives at Washington under the title "Memorial of Lieutenant Maury in behalf of the Memphis Convention in favor of the free navigation of the Amazon River."

But one item was overlooked — Brazil! And Brazil came out flat-footed against the freeing to the world of the Amazon, its tributaries, its spreading forests. In fact one paper put its feeling into a few blunt words: "This nation of pirates [meaning the United States] like those of their race, wish to displace all the people of America who are not Anglo-Saxon."

Upon which the House Committee on Foreign Affairs came to the conclusion that "it would be better, for the present, to drop further action." This was in February, 1855, and not until December 7, 1866, did Brazil, having come to see the benefits for herself in an agreement which would open the Amazon to the merchant vessels of all civilized countries, sign a treaty to take effect the following September.

Herndon, as a reward very likely for this exploration of the Amazon, and also the book he published, the writing of which had been suggested to him by Maury, was made a Commander in 1856, and the next year he was put in command of the steamship, *Central America,* which carried the mails as well as passengers between the east and west coasts. It was the law that a Naval officer should command these mail ships. On the voyage home, on September 11, off Hatteras, in a terrific gale and wild sea, the ship sprang a leak which rapidly widened, until the fires on the leeward side were swamped. Not only the crew but the passengers worked at the pumps, and for a time, aided by sending everyone aboard to the windward side, the ship righted herself, they were even able to light the fires again. She was of the side-wheel type, with what Maury calls "not a little top hamper." The water gained in spite of the desperate efforts of crew and passengers, the hull filled, the fires were all extinguished, and there the ship wallowed, helpless as any log. Every method was tried by Herndon, using what sails were available, but the fury of the storm was too intense; sail after sail

was blown to shreds. All through the day and night work went on — the foremast was cut away, efforts were made to head the wrecked vessel into the wind with shreds of canvas strategically placed — all was useless, and steadily the storm increased.

Then, about noon of the twelfth, the storm began to lessen, there was light in the dark sky. A small ship appeared, ran close, was asked for help, could give none, and sailed away. Two hours later a brig saw their signals of distress and reached the sinking vessel. Herself considerably battered, she nonetheless hove to, promising to do her best. Her own boats were too small to live in the sea that tossed the two ships about, and those belonging to the *Central America* had to do the work.

Back and forth they plied, each carrying two loads, in all a hundred persons. Darkness came on, and the brig kept drifting farther, unable to beat back against the storm, so crippled she was, until the two vessels were several miles apart. All the women and children had been saved, some of the men passengers were also safe. To one of these, being lowered into the last boat, Lewis Herndon gave his watch:

"Will you see that this is delivered to my wife? Tell her — "

But he was unable to go on. He bent his head, covering his face with his hands, and turned away. He was not, he knew, to see that wife, nor his lovely young daughter, again. He would go down with his ship. That daughter, his only child, would some years afterward marry Chester A. Arthur, later to be president, and become the lady of the White House. Mr. Payne, the man to whom he had given the watch, carried out the trust, and told Herndon's widow of that brief moment. Others reported how the Commander once again took charge, ordered the life belts distributed, superintended the making of rafts, made every preparation possible. All being done he went to his cabin and put on his uniform, tearing the oil-silk covering

off the gold band of his cap. He then took his stand, with his first officer Mr. Van Rennselaer, beside him, at the wheel house, while rockets were sent up to attract any possible help. The ship fetched a sudden lurch, and Herndon lifted his cap — she sank.

Just before that final moment the boatswain's boat, which in spite of a hole gouged in its side, had rowed back through the darkness, hailed him. He ordered her to keep off, fearing the suction of the sinking vessel would drag her down. That order was the last he spoke. She backed away, was saved.

Fifty-two of those on board when the ship sank were able to last through the night, clinging to the rafts and pieces of wreckage, and were then picked up. Very few of either the passengers or the crew were lost, a bark, having seen the rockets, arriving in time. But neither Herndon nor his first officer were ever seen again. The commander was only forty-four, in the prime of his life, and was a great favorite throughout the Service, merry, gentle, warmhearted. To his relatives his death was an agonizing loss.

Another matter in which Maury interested himself, and to which he gave much time and work, including traveling about the country to lecture to various associations, was the establishment of a land meteorology after the pattern of that which he had established for the sea. In these talks Maury urged farmers, as he had once urged sailors, to make daily observations of wind and weather, storms, rain, thunder and lightning, temperature, and all the rest, as well as the condition and the yield of crops. He asked to have such observations and notes sent to him in Washington where he would have them made into land charts. Moreover, he begged his hearers to demand of Congress an appropriation to establish a central office where all these reports could be thoroughly studied and the necessary information

in regard to the weather telegraphed monthly, or weekly, even daily, to all parts of the country, so that farmers everywhere would know of approaching storms, severe frosts, excessive heat or drought, and prepare against the danger to their crops. At an address, early in 1856, before the U.S. Agricultural Society at Washington he told his hearers that, when he was asked what possible importance land meteorology had for farmers, he answered, "Everything. The atmosphere is a great basin which envelopes this globe, and every plant and animal that grows thereon is dependent for its well-being upon the laws which govern and control the 'wind in its circuits,' and none more so than man, the Lord of all. To study these laws we must treat the atmosphere as a whole. We now have the seas made white with floating observatories all equipped with instruments that are comparable, observing the same things to a uniform method, and recording these observations to a universal plan. . . We have arrived at the point at which observations on the land are found to be essential to a successful prosecution of our investigations into the laws which govern the movements of the grand atmospherical machine. At sea we have the rule; on land we look for the exceptions. . ."

Maury was able to report to the Association that it was possible to hope that not only over the United States, but over other parts of the world, a network of instruments and observers would be spread. Adding that men of the highest scientific standing, like Leverrier, Quetelet, Humboldt, Jansen and others were ready to cooperate on any plan which might be worked out.

It was natural that the meteorological story should include the land as well as the sea, and that a man like Maury, never satisfied with half a job, should do all in his power to make it complete.

What he foresaw and planned was in fact the weather bureau

of today, with its worldwide reports of conditions, not alone of weather, but of crops.

Maury had been pushing this idea since 1851 and, in November of 1855, writing to his wife's cousin, B. F. Minor, said he was feeling very much encouraged. "The plan," he wrote, "goes on swimmingly. I have almost volunteers enough now with offers of service . . . and signs of encouragement are pouring in every day. . . There came this morning a letter from a gent. in Missouri informing me that the Legislature of that State has authorized the establishment of five mete. observ. and voted the money for them. . . I begin to think I have hit the nail on the head."

A letter from Maury's daughter Diana, a month later, gives an enthusiastic glimpse of the work going on, not only for the "plan mete" as Maury nicknamed it, but in other directions. "Papa," she tells her cousin, for she too is writing Minor, "is busy rewriting his Physical Geography for the Harpers. He is also busy just now 'making bricks' (as he calls it) for the publishers in the shape of a National Almanac . . . which is to contain valuable and interesting matter for the multitude, and which the Harpers promise him will make him President of these United States. Papa has a letter from Quetelet, Astronomer Royal of Belgium; he is going to put 'Meteorology for the Farmers' in his *Annuaire*. Lord Wrottesley says that they in England are ready to follow our lead about the mete. . ."

In that same month of December Maury delivered his first series of lectures, six of them, before the Lowell Institute of Boston. He badly needed money since his pay had been cut, and was glad of such an opportunity, not only to earn the $500. they brought him, but to spread his plan. The general subject was *Winds and Currents of the Sea,* but he covered a wide range. That he was interesting is vouched for by one hearer in a letter that must have pleased the lecturer greatly: "From our citizens

there comes one response, 'Excellent, Capital, The Lecture of the Season'. . . I was told by men high in office and the estimation of the community that it was the best lecture and the most interesting to them that they had ever heard."

The fact that Maury's lecture had to be put off for an hour because it was Lyceum night, and that the audience had already sat through one hour's lecture and then listened another hour and a quarter to him "so still that throughout the whole one might have heard a pin drop," is high praise not alone for him but for the Boston audience.

After leaving Boston, he made a tour through Massachusetts and New York, giving lectures at ten different cities at $50. each. But in Buffalo the crowd was so great at the first lecture that the next night he repeated it to another full house. In the Buffalo *Commercial Advertiser* is this bit of personal description in its review of the evening: "His appearance is that of a kind-hearted, benevolent man of fifty; his forehead that of a philosopher, his eyes and lower face indicative of poetic sentiment." As to the lecture, "We listened with unalloyed pleasure . . . beautifully written, rich in descriptive power and full of a sailor's love for his ship and his fondness for strange scenes, we have rarely listened to a better specimen of 'word painting' than that which referred to a western passage across the Pacific. . ."

The success of these lectures and the much-needed money they brought in at a time of stress, opened a new field for Maury, and in 1858 he went on another month's tour during the winter, giving twenty-five lectures in twelve different cities, ranging from Rochester as far as Indianapolis. He had five different lectures for this tour covering *The Atlantic Telegraph,* two on extending meteorological surveys to the Great Lakes, one on the *Highways and Byways of the Sea,* another on *Workshops and Harmonies*

of the Sea. In all these different places he spoke to packed houses, often seeing large numbers turned away because there was no room left, and everywhere the newspapers praised him highly, particularly emphasizing the fact that he, to quote one, the Cleveland *Plain Dealer,* "invested his subject with a degree of interest and power of attraction that was such as to challenge the admiration and rivet the attention of his audience from the opening to the close."

There was something that stuck in the throats of these newspaper critics, however, and that was that Maury spoke as a plain man to his listeners, very much as a good lecturer does today. But they missed what they called "the graces of oratory and the beauties and effects of elocution." Possibly one of the things that kept his hearers interest "riveted," was the absence of these elocutionary highfalutings which, whenever a man stood up in front of an audience, were then considered so essential, however boring.

Maury came home happy over the success of his lectures. But travel in the northern part of New York and about the Middle West was a miserably uncomfortable business. Trains were slow, cars cold, hotel rooms apt to be bleak. Driving from a station to such a hotel through a blizzard in below zero weather for a Southerner was a real hazard. By the time Matthew was home he was suffering from rheumatism and thoroughly tired out. The rheumatism, complicated by gout, hung on for a long time; indeed, he was to suffer from its attacks for the rest of his life.

Good it was to be home, to be petted and made much of, to sit again in the pleasant parlor with his family about him, his daughters ready to write letters for him, his friends dropping in. And he began to feel better, to take up again the work at the

Observatory, to watch some particularly interesting star or planet, to go over the charts sent in from all over the world. The anxieties and injustices of the Retiring Board were over. He had been given the rank in the Service he was more than entitled to, his position as Superintendent of the Observatory was recognized as vital to the Navy, or for that matter to the Nation. It looked as though happy, hard-working, interesting years lay ahead.

But there was a shadow over the country, a writing on the wall. All thinking men sensed it.

One evening, when the sons and daughters had gone to their rooms and to bed, Matthew and his wife sat alone together. He was studying a chart on which were laid out the ship lanes he had prepared for Atlantic travel between America and Europe, lanes some twenty miles broad, varying in distance from each other by one to ten degrees. The eastern lane was to the south of the westward one. This chart had been the idea of a Bostonian, R. B. Forbes, and it was by invitation of a board of underwriters, who were willing to pay the costs involved, that Maury had drawn it. He had studied upward of 46,000 days of wind and weather observations sent in to him from that wide stretch of the Atlantic on the logs of sea captains, and he felt that he had marked the very best routes to be followed in either direction. The Navy put them to use immediately with entire satisfaction, and a Naval friend of Maury's had recently sent him a letter relating his use of them, and their excellence.

Maury read the letter to Diana and then laughed:

"Nannie, we human beings are odd creatures. Here's this chart of mine which, as you know, was published three years ago, and has been recommended by the Navy and used by several ship companies, yet the greater part of the world pays no

attention to it. They'd save money, they'd save ships and they'd save lives if they did. Well, some day, they'll come to it; but one can't help asking oneself why the lag? It's like the mete observation for the farmers. Some see its use at once, some work for it, some legislatures pass the needed acts to help it work. But most don't. There's no answer except that large bodies move slowly, and the human race is a very large body."

It was not until 1898 that all the transatlantic ship companies finally consented to an agreement binding them all to use the sea lanes. In the discussions preceding this agreement it was admitted that Maury must have put in a deal of hard and thorough work, of patient research, to plan these highways of the sea. "If only we had recognized this earlier," one of the men present remarked, "we should have averted many an accident on the seas, saved many a life."

Quite so.

As to the fate of land meteorology, in that same year of 1858 Maury, speaking to the Mechanical and Agricultural Society of Alabama at Decatur, had this to say:

"Several years ago I proposed, you recollect, a system of agricultural meteorology for farmers, and daily weather reports by telegraph from all parts of the country for the benefit of farmers. Take notice now that this plan of crop and weather reports is *my thunder;* and if you see someone in Washington running away with it, then recollect, if you please, where the lightning came from."

Fortunately he had a sense of humor. He was too human not to have it.

The end of the matter was that, although in 1858 a number of cities, Buffalo among them, memorialized Congress to "establish a general system of daily telegraphic reports on the wind

and weather," Congress paid slight attention. It was years before it did, and the Weather Bureau was established. But then Maury's name was not mentioned. As his daughter noted, "Today, although almost everyone in the civilized world listens to the Thunder, no one remembers to look for the Lightning."

CHAPTER 13

The Three Years Before the War

DURING THE troubled years before the Retiring Board's findings were finally squelched, Maury's two eldest children, Betty and Diana, were married, Betty in the spring of 1856 and Diana two years later. Betty was married to a cousin, William A. Maury, Diana to S. Wellford Corbin, of Farleyvale Plantation, close to the Potomac. The Corbins had a large estate, plenty of slaves, while Betty had married a young man without wealth, but with energy and intelligence. Both were men of whom the Maurys heartily approved, and Matthew was happy in these marriages, in spite of the fact that when the two girls were little things he had once stated that he knew he would hate the men who should marry them from the bottom of his heart, that he wanted them always as they were then, his own children, his beloved little girls — "I wish I could give them physic to keep them always children."

Matthew could be stern when it seemed to him sternness was called for. Diana tells of one occasion when he found the two girls reading the harmless and charming story by Maria Edgeworth called *Helen*. He had told his children that so long as they remained students, they must read no fiction; waste of time, and that was a waste, he would not abide. Therefore, one winter afternoon, when he found the two enthralled in the story, which Betty was reading aloud to her sister, he said nothing, but led the two scared youngsters by the hand, the book tucked under his arm, downstairs to his wife's little sitting room where a

fire was burning in the open grate. Still silent he laid the book on the burning coals, turning and twisting it with a pair of tongs until it was completely burnt up. Meanwhile the girls were weeping bitterly. Not only to have the story so abruptly, so tragically ended, but because Betty, who had been on a visit to Washington (this was while the family still lived in Fredericksburg) had been lent the volume by cousin Sally Fontaine with whom she was staying. It was one of a set. "How we cried," she writes. "It seemed such a terrible thing to burn a book — a precious book — of which we had so few. And then our honor was touched to the quick, for we had borrowed it. . . I for one would gladly have taken a whipping instead, to be allowed to return the book uninjured." It was only years later that the girls heard, having been afraid to say anything to their cousin, that somehow their father had got a matching copy of the book and sent it to Sally.

There was another occasion when poor Diana suffered an equally severe punishment, far outweighing, one cannot but insist, the small wickedness she had been guilty of. It seems that she had learned how to handle the great telescope in the Observatory so well, becoming able to find any star she sought by observing the right ascension and declination from the *Nautical Almanac,* that her father presented her with a handsome telescope for her very own. It was brass-mounted and twice as long as she was tall, and she could find Jupiter's moons or Saturn's rings with it. On clear nights, bursting with happy pride, she would mount the instrument on a stone pillar in the garden, inviting her young friends to ask for any star or planet visible at the time, and presto, there it would be in the field of the glass. But she loved also to use it all alone, and in the day would screw on the colored lens, sighting it through the big north window in the library upstairs if it were too cold to be in the garden.

"But one sad Saturday," she tells us, "Satan entered into me and I neglected to do my task of mending in the time allotted to it, being occupied with my dear telescope. I was called up, reprimanded, and told to have my task done within an hour and a half. . . I thought, I'll take one more look and then hurry to my task, but that look took longer than I expected, and very little of the task was done when my time was up. The case was referred to Papa, who, without a word spoken, boxed up my telescope and sent it off, I never knew where . . . for years I could not speak of it without tears."

There were only two things, two sins as he called them, which brought punishment from their father to his children — any lie, however tiny, any act of disobedience. But he was careful not to take unnecessary issue with them, and careful, too, when he gave an order to see himself that it was carried out and not forgotten. There was never any nagging, any discussion and, except when one of these rules were broken, and they seldom were, the whole atmosphere of the home was sunny and loving. Matthew was a man who was entertaining and genial with his own family, not waiting for guests to call out these traits. Laughter around the Maury table at mealtimes was the rule, a Gallic gaiety of spirit, but the conversation was good as well as amusing, and it was conversation, not monologue.

The two older boys at this period were sixteen and fourteen, and in school. Matthew Fontaine, the baby, was six, Lucy, the youngest of the five girls, seven at her sister Diana's marriage. Eliza and Mollie were ten and twelve, and beginning to take the place of their married sisters in helping their father with his correspondence and in doing the household tasks assigned them. Schooling went on at home for these girls, and was thorough. Eliza also taught young Matthew spelling and the beginnings of arithmetic.

boundary of Lake Superior. Here the Army was already at work in the matter of studying weather conditions and variations. But the Army had no plan for using the telegraph, for giving thus advance information as to changes in temperature, winds, arriving storms or burning droughts. At the end of December, 1858, Maury wrote a long letter to Captain E. P. Dorr, President of the Lake Board of Underwriters. Dorr had written Maury, informing him of what he already knew, that Captain Meade, with a corps of assistants, was surveying the lakes, and was provided with barometers, psychrometers, thermometers, wind and rain gauges, intimating that there was nothing more to be done. Maury replied that he had already called the attention of the lake people to the fact that the means and appliances for the system he was advocating were already at hand, and what remained to be done was to engraft upon them the telegraphic features with the plan for instantaneous discussion. . .

"The system of observations which I propose for the lakes should not be confounded with the admirable system which has so long been conducted by the army, and to which alone we are indebted for almost all we know concerning the climatology of the country. The system of observations which I propose is an extension to the lakes of that system of coöperation and research which has proved so beneficial for commerce and navigation at sea, with this difference, that certain of the operations be reported daily to a central office by telegraph, and this telegraphic feature is a great improvement upon the sea plan. The army system is not telegraphic . . . it was established long before the electromagnetic telegraph had any existence."

The Army noted differences in climate, and under Secretary of War Calhoun, Maury continues, established a system of meteorological observations that had been carried on from 1819 to the

date when Maury was writing his letter. These Army observations were published from time to time in the Surgeon-General's office . . . frequently not until after years had elapsed.

In 1873, after Maury's death, Captain Dorr wrote to Diana Maury Corbin an interesting letter on this long-past subject of interest. It seems that Maury had come to lecture at Buffalo in this December of 1858, and had seized the opportunity to visit Captain Dorr, who had marine inspectors and surveyors subject to his orders at all the principal cities around the lakes. "He wanted," wrote Dorr, "to discuss the observations daily at Washington, as they are today (being discussed). His intelligent, original mind invented and suggested the present system of meteorological observations; and the writer wishes this in some way to be put on record, to do justice to the dead Maury. . . After Maury left here I drew up a caption, heading several papers as a Memorial to Congress, asking them to enact a law and appropriate funds to carry out (which is now being done) Maury's plan. . . I then sent them to each important city upon the lakes (eight including Buffalo) to the marine inspectors, procured the signatures of all important men, and then forwarded these to each member of Congress representing the districts.

"These memorials did not pass in the winter of 1858–59; but I have been told that the interest excited in the plan at that time by one person (who followed it from its inception) resulted in its ultimate passage and the present system. . . Things have changed, but I could not rest unless I told someone that the late M. F. Maury was the originator of the design and detail in all its parts. . . Honor to whom honor is due. . ."

As a final note, Mr. Vest, congressman from Missouri, in 1880, in an address to Congress asserted "The whole signal service of this country originated with the Navy, not with the Army. The

man who commenced it, in whose brain it first had existence, was M. F. Maury. In 1857 I well recollect . . . his delivering lectures at his own expense to the people, urging upon them that they urge their members of Congress to establish a signal service observation system. . . If that had been done, Sir, millions of dollars would have been saved to the agricultural interests of the country."

It must have been disheartening to try so hard and try in vain to get something so valuable as a working weather bureau established in the country he so dearly loved, losing to the stupidity, the lack of enterprise, the narrow provincialism of a lot of politicians. The war put an end to Maury's efforts, but after the war he once again toured portions of the country in the service of this system, and again in vain.

One cause for the failure of this simple and excellent plan of Maury's was the determined opposition to it of a certain Professor Henry, then Secretary of the Smithsonian Institute. He declared it would be a rival to a plan of his own proposed to his Institute and fought it tooth and nail. Nothing at the time developed from Henry's plan except to deprive the country of Maury's. In regard to Henry, Maury made a few remarks to his relative, Frank Minor: "I send you the papers for the joint Mete. Obs. of the Smithsonian and the Patent Office. The Agri. Bureau has been up to propose to cut loose from the Smithsonian, and join me. So you see how the world wags. I do not see how the Smithsonian plan and ours at all interfere. I am for the quiet life. But unless the Agri. Bureau wakes up and takes views very different from those expressed to me, not much will be done there. . . I am to be inaugurated next Monday as Pres. of the National Institute; they elected me a month ago in Henry's place. You have seen, in the *Intelligencer*, the Parthian dart he flung at me."

Maury was quite outspoken in declaring that the Smithsonian and the Agricultural Bureau of the Patent Office stole his idea and attempted to carry it out, "but with what success let silence tell." This was in his talk to the North Alabama Agricultural and Mechanical Institution at Decatur in 1859.

With the new year of 1860 Maury began to have grave fears for the future of the Union. During the last weeks of 1859 and deep into the spring of the new year he was busy over a new edition of his *Physical Geography*, greatly enlarged and, as he wrote his old Tennessee friend, Bishop Otey, "I hope improved." In this letter there is a paragraph on Mallory, the man who was so great a turn face. "You recollect Mr. Mallory of Florida was an active Navy Board man, and that he was very unfair, to say the least, in the Senate toward me. He has brought a Bill to increase the pay of all officers, 'except the Superintendent of the Observatory,' and two others. Now, what is to be done with such an uncivil disposition? I do not wish to embarrass the Bill by any opposition to it, for the officers stand greatly in need of more pay; but I think I'll have to suggest an amendment making the pay of the Superintendent of the Observatory that of a Captain in command." He also tells his friend in the same letter: "As for the Union. I see that will have to drift. The dissolution of it will, I fear, come before you or I would be willing to see it. With statesmanship among our rulers, patriotism among our politicians, and virtue among the people, it need never come." And again in a letter to the same friend, written in August five months later, "I very much fear the Union is in danger. Causes seem to be at work which are destined to destroy the Union. . ."

The bishop had asked Maury to be the chief speaker at the ceremony of the dedication of the cornerstone of the University of the South, at Sewanee, Tennessee, on October 10. The com-

mander was due to leave for England toward the end of the month to see to the copyrighting of his new edition of the *Physical Geography,* but he accepted with real pleasure; "I feel as though I must be present when the foundations of this great University are to be laid. . . If I possess influence or weight with the public, it is a talent loaned, and this is precisely one of the occasions on which I ought to put it out. So, if you think my coming and my speech will help on your good and noble work, here I am — count on me, my friend."

The dedication was a great occasion, with an audience of over five thousand persons, including among them eight bishops and two hundred presbyters. The speech was in Maury's best vein and beautifully delivered. In it he took the stand that religion and science are not opposed, even though, as he told his audience, "I have been blamed by men of science, both in this country and in England, for quoting the Bible in confirmation of the doctrines of physical geography. The Bible, they say, was not written for scientific purposes, and is therefore of no authority in matters of science. I beg pardon! The Bible *is* authority for everything it touches. . . The Bible is true and science is true. . . When I, a pioneer in one department of this beautiful science, discover the truths of revelation and the truths of science reflecting light upon one another, and each sustaining the other, how can I, as a truth-loving, knowledge-seeking man, fail to point out the beauty, and to rejoice in its discovery? . . . As a student of physical geography I regard the earth, sea, air and water as parts of a machine, pieces of mechanism not made by hands, but to which, nevertheless, certain offices have been assigned in the terrestrial economy. It is good and profitable to seek to find out these offices, and point them out to our fellows; and when, after patient research, I am led to the discovery of any one of them, I feel with the astronomer of old as though I

had 'thought one of God's thoughts!' — and tremble."

Maury was a man of deep religious feeling and conviction, although not until toward the latter part of his life did he join any church. He knew the Bible and he believed it, not in a small and narrow way, but broadly and generously. The greatness of the Universe, the astonishing interplay of nature — "Had I time, I might show how mountains, deserts, winds, and water, when treated by this beautiful science, all join in one universal harmony — for each has its part to perform in the great concert of nature," — these were his inspirations. This harmony between the Bible and natural science had long attracted him, and was often mentioned in letters to his friends, or to his family. Once he called attention to the fact that the revelations of science "have led the astronomers of our own day to the discovery that the sun is not the dead center of motion around which comets sweep and planets whirl, but that it, with its splendid retinue of worlds and satellites, is revolving through space at the rate of millions of miles a year, and in obedience to some influence situated precisely in the direction of the star Alcyon, one of the Pleiades." He quotes, "Canst thou bind the sweet influences of the Pleiades?" And tells us that the nicest instruments have not been able to tell us how far off in the skies that "beautiful cluster of stars is hung 'whose influences man can never bind.'" But that in the question and its answer are involved both the recognition and the exposition of the whole theory of gravitation. And he reminds us that in the Psalms the world is called "the round world" and bidden to rejoice.

Maury's next speech was made in vastly different surroundings and to a different audience. He sailed from New York October 28 to arrive in England November 14, where he was asked to address the Royal Geographical Society. His subject was the exploration of the Antarctic, in order to find a good site

from which to observe the coming transit of Venus. He had before this urged such an exploration. But by the time he got home again, having attended to the copyrighting of his book, the darkness of coming war was spreading fast. He wrote to his old friend, once tutor, William C. Hasbrouck, in Newburgh, from, as he headed the letter, "Right in the middle of the Atlantic, on Board steamer New York" telling of his London visit, and of dedicating the new edition, in England to Lord Wrottesley who had done much for the cause of meteorology, and in America to "Wm. C. Hasbrouck of Newburgh, who has been such a good and true friend to the author from early youth till now.

"Till now! Do we belong to the same country yet, Hasbrouck? A queer question to ask, you will say; but you must recollect that I left home before the elections — have not seen a Southern paper since; and the latest accounts I have seen are contained in the New York Herald of the 13th, 14th and 15th of last month. . . The people of N. Carolina and S.C. have been more precipitate than I anticipated; and now, my friend, unless you good men of the North and South will bestir yourselves, and take matters into your own hands, and out of those of the politicians, I fear me, I fear me . . . we shall not be long of one country."

He arrived in his own country to find that Lincoln had been elected president, and that South Carolina had called a secession convention. On December 20, 1860, this convention passed a unanimous resolution declaring her no longer in the Union. By February her example was followed by Mississippi, Florida, Alabama, Georgia, Louisiana and Texas. But Lincoln came to his inauguration in a country still at peace.

CHAPTER 14

War

IN JANUARY, 1860, Maury had attempted to get Pennsylvania to act as mediator between the southern and northern states, whose temper was rising, urged on by politicians and fanatics on both sides. Reminding the governor that Virginia had successfully performed that service in 1832 when South Carolina was ready to go to war over the bitter dispute raised by the imposition of high tariff duties threatening to ruin the agricultural wellbeing of the South, duties pushed through by Northern anti-slavery sympathizers, he believed it possible Pennsylvania could do a like, an even greater service to the country. There had been no calm discussion of the issues between the sections, the people as a whole had not been given opportunity to express themselves, and Maury insisted that "the people, and the people alone, are capable of extricating us. You, my dear sir, and your state — not Congress — have it in your power to bring the people into the 'fair way' of doing this. This brings me to the point of my letter — then why will not the great state of Pennsylvania step forth as mediator between the sections? Authorize your commissioner to pledge the faith of his state that their ultimatum shall not only be laid before the people of the Keystone State, assembled likewise in sovereign capacity, but that she will recommend it to her sister states of the North, for like action on their part, and so let the people, and not the politicians, decide whether this Union is to be broken up."

It was a sane, but not a practical proposition to get the settled

opinion of the Southern States defined, to present it to the Northern States, receive their reaction, and then mediate between the two. The *people* of the entire country would thus be given the opportunity to express their will, quietly to "talk things over."

It was, of course, not to be. The brush fires were already blazing; presently the forest would catch the flames.

Writing to Hasbrouck just after the Lincoln inauguration, Maury remarks that "officers of the Army and Navy, should war come, will have a hard time; and indeed who will not. No military man can permit himself to accept service with a mental reservation. All who are foes of his flag and whom his country considers enemies of hers, are enemies of his . . . the line of duty therefore is to me clear — each one to follow his own State, if his own State goes to war; if not, he may remain to help on the work of reunion."

April 10 he writes his friend again: "Civil War is like a conflagration! . . . You know that in civil war men become fiends, and there is no telling where our divisions will end. As for me, I am getting old; my life is not worth much now, at any rate; if I am knocked over I would like to have my little savings and scrapings where wife and child could get them. Help me to arrange this. . . I have no idea what Va. will do. If the Convention pass a secession ordinance, it does not follow that the people will ratify it."

Meanwhile as Superintendent of the Observatory, Maury went on with his work. He was trying to get up an expedition to the South Pole, and preparing *Nautical Monographs No. 2* and *No. 3* for publication. But all this was over when, on April 12, Beauregard at Jefferson Davis' orders fired on Fort Sumter and on the fifteenth, President Lincoln issued his proclamation calling Virginia to furnish 75,000 troops to force South Carolina back into the Union. Virginia's reply was an Or-

dinance of Secession, on April 17, and a call to all her sons in the Federal service to come to her support. On the twentieth Maury handed in his resignation as Superintendent, with his commission as a Naval officer, and went to Richmond. He was at once appointed one of a Council of Three, the other two being Judge Allen, Chief Justice of Virginia, and General F. S. Smith, Maury's old friend, who was now head of the Virginia Military Institute. Their job was to discuss with Governor Letcher the military defense and arming of the State.

This covered for the moment his professional side. Home and family had theirs.

In the first place, he must get his family into Virginia. His kinsman, John Minor, hearing he was in Richmond, instantly wrote him to bring the family to his own home in Fredericksburg. Maury wrote back: "Bless your heart for offering us shelter in these times. I have written my wife to accept your kind offer until we find out where we are to go . . . my office here, you know, is only advisory."

It was a bitter grief to Maury to leave Washington and the work he so loved. He wrote Hasbrouck, "I left my beautiful home with my heart full and my eyes overflowing," and when he asked his devoted secretary, Thomas Harrison, who had worked for him almost twenty years, to write out his resignation as Superintendent, Harrison stared at him, went to his own desk, worked a few moments, then came back to Maury, and, his voice choking, muttered, "I cannot write it, Sir," handing him the unfinished message. The two grasped hands in silence, unable to speak.

At Richmond, Maury had Dick, his eldest son, with him while John, or Davy, as his father still called him, though he'd dropped the Jones, was at the University. Betty, her little girl, and her husband were still at Washington where Will was get-

ting his work cleared up before leaving to volunteer, but Diana, with her little girl, was in Fredericksburg with the rest of the family. Farleyvale was too close to the Potomac to make it safe to remain there, and her husband had brought his family to the Minors, although forced himself to return and put his plantation in order so far as could be done before himself joining the armed forces.

The whole world and the daily round of life were suddenly changed, nor could anyone know what lay in the future. On the first Saturday in May, Maury was able to leave Richmond for a few days, hurrying to see his family. He found them well and calm, John Minor and his wife glad of their large house, so that all could be sheltered and cared for.

"It's for us older men, Matthew, who cannot serve our country in the Army, to care for those left behind by fathers, brothers and sons who will be called to the front, and it's a blessed privilege to be able to take care of your dear wife and children. We can all hope that the war will be short, and meanwhile be thankful to do whatever is possible. They are my family, you know, as well as yours."

"All I can say is, God bless you, John. Thanks to you, my mind and my heart are at rest in regard to this, as you say, 'our' family. Did you know, by the way, that the president has refused to accept my resignation, which leaves me in the position of being a traitor, liable to be hung if caught. It's the beginning of a military despotism."

On May 11 Maury received a copy of the *Boston Traveller* which contained an article accusing him of treachery, desertion, and removing buoys in Chesapeake Bay. He wrote to Hasbrouck next day, from Richmond, deeply indignant. "It's all a lie! I resigned and left the Observatory on the 20th ult. I worked as hard and faithfully for 'Uncle Sam' up to three o'clock

as I ever did, and at three I turned everything — all the public property and records of the office — regularly over to Lt. Whiting, the proper officer in charge. I left in press 'Nautical Monograph, No. 3' (*The Southeast Trade Winds of the Atlantic*) — one of the most valuable contributions that I have ever made to navigation; and just as I left it it is now in course of publication there, though I shall probably not have an opportunity of reading proof, and cannot tell what errors or alterations may appear; I have lost none of my interest in these enchanting fields of physical research which I have revelled in for near twenty years. I am here to war, not against science, but against the oppressor and for my fatherland. As for the 'buoys' I touched them not."

Boston had been stupid enough to set a price on Maury's head, which shows to what absurd lengths the growing war fever was driving the staid New Englanders. Maury's only remark was that he considered it an honor. Nor did he let this kind of thing affect his actions. When he received from his scientific friends in London the Bulletin of the International Exhibition scheduled for 1862, he replied to the Commissioners, giving them the names of scientists in the North, and also worked to put Northern people in the way of being able to exhibit handiwork at the Exposition.

June brought Betty and her party safely through the lines into Fredericksburg. Maury was there to meet them. Except for the two older boys, the whole family was together. Betty had news that touched Maury to the depths of his heart. Hasbrouck had reached Washington shortly before she left, hoping to see Maury, even at the risk of going to Richmond, and to persuade him not to leave his Observatory job. That is work, he had told Betty, which helps the whole world and men everywhere on the seas, which does the whole world good. "He said

he could not bear to think you would give up all this for the sake of Virginia, Papa. But I convinced him that you saw it all in a different light, and that anyway, you were now committed."

"No man ever had a better friend," her father answered. "I have put what money I had invested in New York and in those lands in Minnesota into his keeping. I have asked him to treat them as though they were his own, do what he thinks best, and if anything remains after the war is over and reason is back again, why, there will be that small nest egg to help you all."

"He spoke of having been able to handle some business for you and seemed happy about it, but gave no details; I imagine he thought those were for you to relate. Oh, Papa, to think that a man like that, and we, are on opposite sides in this terrible trial to our country!"

"I have weighed the matter well, Nannie, and I feel our cause is just and holy as human cause can be. I fear Hasbrouck does not see our cause in its true bearings, and I will not discuss it with him, for fear of wounding him or his wife. But no man ever had a better friend, or truer."

On June 10 the Committee of which Maury was one was abolished, and he was made Chief of the Naval Bureau of Sea-Coast, River and Harbor Defences of the South. He began at once to plan the making of submarine mines to be laid in Southern harbors and river mouths. Unable to get insulated wire to explode these mines by electricity Maury invented another way to make them work. Oak casks were filled with two hundred pounds of powder, joined in pairs by five hundred feet of rope. In the head of each cask was a trigger attached to a fuse. These pairs of casks were then set afloat to be carried by the current or tide toward anchored or advancing ships, carefully placed so that the casks, or mines as they were, would float down on either side of a vessel. Then, as the rope caught across the bow the

casks would swing close to the sides of the target and when suddenly checked the trigger would spring and the explosion go off as soon as the fuse reached the powder. The casks were so weighted as to move about twenty feet under water.

But they were not a success. When, in July, the first test was made Maury commanded the little attacking party of five boats which were to destroy three Union ships, off Fortress Monroe, by means of these mines. In the dusk of evening they set out, with muffled oars, Maury in the lead with a pilot and four oarsmen, the other four boats carrying the mines, each with its officer and four boatmen. Everything went well; they drew near enough and released their mines just as seven bells (11 P.M.) struck. Softly, swiftly, the little boats rowed away, then paused. No sound came.

What was wrong?

Experiments made later revealed that at the depth of twenty feet the fuses would not burn. Yet such a depth or near it was necessary.

Undiscouraged, Maury continued to work on his mines, carrying on his experiments in the house of one of his cousins at Richmond, Robert H. Maury. This handsome brick house, at 1105 Clay Street, still stands, and was marked in the year 1910 by the Confederate Memorial Society with this inscription on an engraved plaque:

In this house, Matthew Fontaine Maury, LL.D., U.S.N., C.S.N. invented the Submarine Electric Torpedo, 1861–62

Early in August Maury gave a demonstration of his new mine on the James River at Rocketts. The Governor of Virginia, the Chairman of the Committee of Naval Affairs, and the double-twister Mallory, Secretary of the Navy, came to witness it. Maury made this characteristic report: "I made a pair of sub-

marine batteries. Your man Mallory pronounced them humbugs. . . I put them adrift aiming them at a buoy. They caught, drifted down, tightened the rope, pulled the trigger, and off they went, blowing up the river, or some of it, sky high, killing innumerable fish. So Mallory after that asked for an appropriation of $50,000 to help me go ahead."

He continued to work at perfecting his mines, and in the beginning of May, 1862, was able to return to his earlier plan of submarine mines to be let off by an electric discharge, when a friend of his, Dr. Morris, President of the Telegraph Company, got hold of a great roll of insulated wire, washed up on the beach at Norfolk and measuring about ten miles in length, and sent it to Maury. The Federals had tried to lay a submarine cable across the Chesapeake from Fortress Monroe to Eastville, but couldn't make it and left the wire in the water, little dreaming that they had given the enemy a weapon against themselves.

The money promised was slow in coming, arriving only in driblets, but by early June, fifteen of the death-dealing tanks had been laid in the James River. Maury sent in a detailed report of these mines, describing exactly how they were made, how set off, how anchored. Not only were the fifteen laid down, but eleven others, tested and ready for use, were being held in reserve. Lack of powder prevented the construction of more at that time.

Maury never claimed the original idea of making an explosive mine as his. Fulton had played around with an experiment of firing a mine with electricity, but was not able to make a battery which worked, and others had made somewhat similar experiments. But Maury was the first to see and to demonstrate that it was possible to construct a powerful weapon — the sunken torpedo — to be used against enemy ships and was the first to make them. Maury stated emphatically: "All the electric tor-

pedoes in that river were prepared and laid down either by myself or by Lieutenant Davidson, who relieved me after having been instructed by me as to the details of the system. These were the first electric torpedoes that were successfully used against an enemy at war." The river he mentions is the James.

But Maury received no credit for his inventions from Jefferson Davis when he wrote his *Rise and Fall of the Confederate Government.* In that book Maury's name was not even mentioned in regard to the matter, Davis giving a friend of his, General Gabriel J. Rains, all the praise and honor. In October, 1862, the Confederate President made this man Head of the Torpedo Bureau, which was a long while after Maury had made and laid the mines, with which Rains had had nothing at all to do. Later a man named Scharf, in a *History of the Confederate States Navy,* highly praised Lieutenant Hunter Davidson as the pioneer in the making of submarine torpedoes, following Davis in ignoring the real inventor. Scharf's history, however, is so crammed with errors that one more occasions no surprise. Apparently Rains and possibly Davidson, who might have been ignorant of both books, made no effort to bring out the truth, and to insist that the credit should be given where it belonged, to Commodore Maury. Later writers have corrected the injustice.

In the months of September and October of 1841 Maury wrote a number of articles signed "Ben Bow" for the Richmond *Enquirer.* In these articles he urged the building of a strong navy for the Confederacy, but one suited to the work it would be called on to do. The navy required was mostly for smooth water and shallow places, he explained. For $3,000,000 a navy of small vessels could be quickly built. "We want at once a navy for our rivers and creeks and bays and sounds; a navy that for the most part will only be required to keep the sea for a few

days at a time." The ships were to be small, the guns they carried big. He sketched his idea of the type of ship he thought best — "so small as to present little more than a feather edge" as a target, and which, fully loaded, would show only from two to three feet above water. Each ship should be armed with two rifled cannon of the largest caliber, mounted in the forward part of the little steamers. They would make the smallest possible target to the enemy, but be easily maneuverable and carry a big wallop. Each should, he estimated, fully equipped, cost about $10,000.

Governor Letcher and other Virginians of importance were greatly taken with this plan, and it was ready to be presented to the State Government when the Confederate Congress, to Maury's surprise, passed two Acts in December, 1861, taking over the plan from Virginia, and providing $2,000,000 to build not more than a hundred of such small war ships. A Board of Naval Officers had approved Maury's designs.

Maury wasted no moment getting to work at two yards, one on the Rappahannock River and the other at Norfolk. The navy yard at this place had been burned during the past year, but was once more fit for use. His gunboats were to be twenty-one feet by a hundred and twelve, draw six feet of water, carry two nine-inch guns forward, one 32-pounder aft. He hoped to have the last hull ready for fitting-out by mid-April of 1862.

Troubles began almost at once. Not enough iron, not even enough wood, was to be had. Mechanics were rare as hens' teeth. The engines for the boats also appeared to be extremely difficult to find or to make. Mallory, in fact, was sitting down on the job, more than willing to have it fail. Then came the success of the *Merrimac,* which had been raised after the fire in the harbor had caused its sinking and converted into an ironclad, thanks to the efforts of Governor Letcher. That was fine.

But the result was that the Confederate Congress was then induced to issue an order for the discontinuance of all work on the wooden gunboats, ironclad rams to take their place. Why there would be enough iron to build these, when the little required for the wooden ships could not be delivered, was not explained. At any rate Mallory asked the President to order that the money voted for Maury's ships, except enough to complete fifteen already on the ways, should be transferred to the making of new *Merrimacs.*

It was a blow to Maury. "All my gunboats are to be converted into shot proof or abandoned," he wrote to Frank Minor. It was the end of his plan, and for that matter the end of any navy for the Confederacy. Less than two months later, on June 8, he wrote Minor again and made plain his opinion of Mallory in these scornful words: "The administration is gravely proposing to build here at Richmond a navy to go down and capture Fortress Monroe! Mal. proposed the other day that we should undertake to build such a navy, asserting that it could be done. That, I should say, is a considerable stirring up. Less than a year ago I was to be banished for advocating a navy — (this was when the Ben Bow articles were being published and Mallory was furious at criticisms on his work as Secretary) — now, since all our naval waters have been taken away, and we have nowhere to float a navy, yet we are *to have a navy* to take the strongest fortress in America. Hurray for Mal.!"

In the coming August the criticisms of the ineffectuality, to use a mild, nice word, of Mallory had risen loud enough to get the Congress going. A joint special committee of both houses was ordered to investigate Mallory's department. They kept right on investigating for a year and a month, but they couldn't oust Mallory, who was too strong politically, in spite of the many proofs of the man's utter lack of qualifications for the post

he held. Edward A. Pollard, in his *The Lost Cause* has this to say: "In no respect was the improvidence of the government more forcibly illustrated than in the administration of its naval affairs; or its unfortunate choice of ministers more signally displayed than in the selection for Secretary of the Navy of Mr. Mallory of Florida, a notoriously weak man who was slow and blundering in his office and a butt in Congress for his ignorance of the river geography of the country."

Weak and blundering in everything except what concerned Mr. Mallory, but astute and strong there.

The capital of the Confederacy had been moved to Richmond from Montgomery, Davis having been reinaugurated there under the permanent constitution on February 22, 1862, birthday of a truly great Virginian. That, as a president, Davis never was, but, a graduate of West Point and expecting, hoping even, to be made head of the Army, he was the peg in the wrong hole through no fault of his own. He had selected a second-rate group of men to make his cabinet, he was, Maury declared, haughty and self-willed at that early period. He learned a good deal during his four years as President, but he had much to learn.

By now both the older Maury boys were in the fighting; Richard, twenty years old, having joined the 24th Virginia Regiment. When Harper's Ferry was seized, John with the rest of the students at the University departed for the front. He was put on the staff of General Dabney H. Maury, his cousin, Uncle John's son, but considerably the elder. In April the rest of the family, driven out of Fredericksburg before the advance of the Union troops, which captured the "sweet old Burg" as Maury used to call it, had moved into Albemarle County, and in June came news that Richard, on the first of the month, had had his horse shot under him and was himself wounded.

In addition to these private griefs Maury, who had always

been so busy with important work, was kept idle. When he pressed Mallory for assignment to active service that servant of his country retorted that he thought the Commodore — for such was Maury's rank in the Confederate Navy — would be of most use doing nothing. The Secretary did go so far in August as to offer the command of a gunboat at Charleston, a gunboat which was to be used strictly for harbor defense, and not to put out to sea. Maury refused it — it could hardly be called active duty, since Charleston at that period was not even threatened.

He must have smiled a trifle bitterly, for almost exactly a year earlier he had received from Grand Duke Constantine, Grand Admiral of Russia, a pressing, urgent invitation, together with a high expression of admiration for his work: "That your name is known in Russia I need scarcely add," writes the Duke in the course of this letter, "and though 'barbarians' as we are still sometimes called, we have been taught to honor in your person disinterested and eminent services to science and mankind. Sincerely deploring the inactivity into which the present political whirlpool in your country has plunged you, I deem myself called upon to invite you to take up your residence in this country where you may in peace continue your favorite and useful occupations.

"Your position here will be a perfectly independent one; you will be bound by no conditions or engagements; and you will always be at liberty to steer home across the ocean in the event of your not preferring to cast anchor in our remote corner of the Baltic. As regards your material welfare, I beg to assure that everything will be done by me to make your new home comfortable and agreeable; while at the same time the necessary means will be offered you to enable you to continue your scientific pursuits in the way to which you have been accustomed." [This invitation included Maury's family.]

"I shall now be awaiting your reply, hoping to have the pleasure of seeing here so distinguished an officer, whose personal acquaintance it has always been my desire to make, and whom Russia will be proud to welcome on her soil."

The "barbarian" was certainly quite a contrast to Mr. Mallory.

Maury sent back a long letter in which he put heartfelt thanks, but made it plain that he must stay where he was, in his own State, helping to fight the enemy now at her gates. He explained his attitude in the dispute between the two sections of the country, his inborn feeling of State's rights. Virginia, he wrote, "when she accepted the Federal Constitution and entered the Union, had done so with the formal declaration that she reserved to herself the right to withdraw from it for cause, and resume those powers and attributes of sovereignty which she had never ceded away, but only delegated for certain definite and specified purposes. . . And here I am, contending for those very principles for the maintenance of which Washington fought when this, his native State, was a colony of Great Britain. The path of honor and duty is therefore plain."

This statement puts clearly the feeling that had urged so many, and the best, of the Southerners, to resist what they considered the demand of the North to follow her path and go her way. The South, as he said elsewhere, had never threatened to invade the North, to constrain her to alter her ways or in any way to interfere with what she thought best for herself. Let the North refrain on her side. He did not like slavery, believed that a means to end it must be worked out, but it was for the South to discover and put these means into practice.

France, too, wrote begging him to make her his refuge and home. In either country he would have had his family with him, safe from danger or want, be free to do the work he loved, be honored and welcomed.

Mallory meanwhile was anxious to have him out of the country, fearing that his friends, if he were not given some post fit for his abilities, would raise their voices. In September therefore orders were sent to Maury to go on a "special service" commission to England. This service was merely the purchase of ships from Britain to be used by the Confederacy. It took patience and good sense, but any young officer could have done the work. There was nothing to call out constructive and creative action. Maury should have been in a position where his breadth of view, his excellent talent for putting his finger on the spot and his tremendous energy could all have been used for the Confederacy.

He went to his family who were staying in Albemarle County with a relative, said good-bye, and with his youngest son, Matthew, whom he always called "Brave," departed for Charleston to sail, rather heavy of heart, for the new job.

He was under no delusions as to why he was given this "special service." "I was here," he wrote from England after the end of the war, "really to be got out of the way, but nominally to superintend contracts with men of straw who could not pay their hotel bills, but who had made pretended contracts with the Navy Department for about fifty million dollars, and who never did anything. There was a great desire to have me in the Navy Department and Mallory was afraid he would be turned out. Therefore he sent me here with hands tied, *and* for what I did I took the responsibility à la Tennessee."

CHAPTER 15

England Until War's End

THE FEDERAL Navy was keeping up a blockade on Southern harbors and, when Matthew reached Charleston with his son toward the end of September, it was a fortnight or more before their ship, the *Herald,* could slip out to the open sea. The getaway was not without its thrills. A first attempt had to be given up when a sloop-of-war hove into view and, on the next and successful essay, the pilots, taking the vessel out after dark, ran her aground where she had to remain through the rest of the night. With dawn the little steamer got off, and was away, although a few shots were sent after her. Young Brave was thoroughly excited, clutching his father's arm and gazing back at the enemy sloop which could not, however, begin to equal the speed of their own boat.

"Now, if this were a warship, and you were Captain, Papa, we'd sink her, wouldn't we?"

"Might manage it," nodded Maury. "But if we had been a warship, she'd very likely have kept her distance. As it is, we're in luck having the wind against her, a thing that doesn't matter to us."

A midshipman, James Morris Morgan, had been detailed to accompany the Commodore to England, and he, too, was excited at the escape the *Herald* made. In his book, *Recollections of a Rebel Reefer,* he has some vivid accounts of the voyage. One incident amused him. He was standing with Maury at the taffrail one late afternoon when the ship's captain, Coxetter, approached, looking very much disturbed.

"Anything wrong?" asked Maury.

"Well, yes, Commodore, and I don't know what to make of it. According to my findings, we are sailing at this moment right over the Bermudas. I can't believe they've been sunk, not even by the damyankees, and, what I want to know is, where are we!"

Maury agreed the islands must still be above water, and thought, since the night was clear, that at ten he could take observations that would place them. "If I were you, Captain, I'd slow down and just keep her moving until we can lay a course."

So the ship lounged slowly forward through dinner and at ten Maury, sextant in hand, went on deck, his son and the midshipman, as well as Captain Coxetter, with him to watch proceedings. Maury took careful observations, chiefly while lying flat on his back, and when he had done he gave the captain the course:

"Steer her at her usual speed and we ought to sight Port Hamilton light by four bells" (two A.M.) he directed. "And now come along, Brave, it's long past your hour for going to bed. Good night, gentlemen."

Below he went and to bed, with young Matthew. But the rest of the company, including the passengers, stayed up. All were anxious and most were in doubt.

Four bells. The whole company stared ahead. Nary a light shone on the horizon. Five minutes labored past. Still no light. Then grumbling began. One man swore there was altogether too much damn science aboard, and that they'd probably find themselves well on their way to New York Harbor when day broke. He was still cursing when the lookout called from the masthead "Light ho-o-o!" There were some cheers, some rather shamefaced laughter. It was ten past the hour of two A.M., and really, as the midshipman remarked to Captain Coxetter, "You couldn't run it much closer, could you, Sir?"

"If anyone asks me, I'll say the Commodore is as fine a navigator as you'll need this side o' Davy Jones' locker," and the captain grinned.

The *Herald* had a piece of luck that had nothing to do with navigation. For Yankee Commodore Wilkes' squadron had been hanging about Port Hamilton for several days, taking a look at every ship that came into view on the chance of her being a Confederate. It had left only the day before, and the *Herald* steamed calmly into the safety of the neutral harbor, to drop her passengers and go on about her business.

Maury, with his son and Midshipman Morgan had a fortnight to stay on the lovely islands before the Royal Mail steamer, *Delta,* was due to take them on their way as far as Halifax. The stay proved a delightful interlude. The midshipman and Matthew junior went sightseeing on horseback, swam in the mild waters, fished for glittering bright-hued fish, and attended parties. Maury was received as the distinguished scientist he was, the Governor called upon him, as did the Commandant of Fort St. George, he was invited to dine with each of these gentry, and a dinner in his honor was given for him aboard the British warship *Immortallity,* then stationed in the harbor at Port Hamilton. The hosts and indeed all who met him, English or Bermudians, were eager for information about the war in the States, sympathetic to his cause, in spite of being anti-slave, as was natural, Britain having abolished slavery in all her possessions years earlier.

The *Delta* arrived on schedule and off they went from the gentle warmth and blue skies of Bermuda, to Canada, landing at Halifax, Nova Scotia, November 9. Here again Maury was received with the greatest consideration and honor. The Governor, the General in command, and the Admiral of the fleet in harbor, all vied with each other to entertain him and his

young son, while to Morgan the younger officers delighted to offer a hilarious welcome. Even the hotel where the party stopped flew the Confederate flag, and, declares Morgan, "the hand-organs gathered beneath the windows to play *Dixie*" with tireless energy.

London at last, aboard a Cunarder, and via Liverpool. A house in Sackville Street had been rented and made ready for the visiting Americans, and to this pleasant abode, Mr. Morgan tells us, came day by day a string of carriages "with coronets on their doors," to leave cards on the distinguished Maury, although, having known him for so many years as lieutenant, instead of commodore, he was usually addressed by the former title.

It is interesting to note, by the way, that we have recently restored the rank, commodore, in the Navy after its disuse for a number of years. It stands between captain and admiral.

Maury spent two years and five months in England, arriving at the end of November, 1863, and leaving May 2, 1865. He was able to accomplish little during that time, partly through lack of money, when it came to buying ships, and partly because of the alert watch kept by Union agents over the neutrality of both England and France. Also, both officers and men before the mast were pitifully few. With these handicaps his energy was chiefly turned to political issues. He was a man well-known in the important circles of Britain, a man they delighted to honor. Almost at once he began to do his best to put the Southern cause before the British, both when he was asked to speak at the many dinners given in his honor, and also in the press, and in scientific circles. But here, too, the stream was against him, for presently the tide turned in the war, the Northern armies began to make their strength felt and, as time went on, it became increasingly evident that the South, gallant as her armies were,

was lacking more and more in the wherewithal for fighting, and even in the men to do it.

So, where in the October preceding Maury's arrival in England, Gladstone, then Chancellor of the Exchequer, spoke with wonted fire of his conviction that the South was certain of success in her desire to secede from the North, that "Jefferson Davis and other leaders of the South have made an army; they are making, it appears, a navy; and they have made, what is more than either — they have made a nation," this conviction would not long endure. It was the same in France. There Emperor Napoleon III, first all friendliness and cooperation, cooled off. Where, during his first winter, Maury was able to say "the Emperor may, and I hope will, decide on recognition, and there are hopes here that when Parliament meets, February 5, the British government may find itself compelled to do something," these hopes could not last. When matters were going strong for the South, Napoleon III had given the Confederacy an invitation to build ships in France. In 1863 a contract was signed to build two ironclad rams at Bordeaux, Maury hoping to have the command of one of them. He sent his plans with the costs to Mallory. These were approved and work started, but before they could be finished the Emperor changed his mind, refusing to permit their construction for the Confederacy. Partly this was because Britain had refused to join in any overt act against the Union and for the Confederacy. Maury had had some correspondence, too, with the Arch-Duke Maximilian of Austria, to whom the French emperor had offered the crown of Mexico, France having recently conquered that country: but all this resulted in nothing. Maximilian went off to his new dignities, having been proclaimed Emperor of Mexico by a Mexican deputation at the duke's palace Miramar, on the Adriatic, on April 10, 1864, with the Confederacy entirely out of the picture.

During this period two ships of war had been bought by Maury, one in March, 1863, a new screw steamer, launched at Dumbarton-on-Clyde, fitted out as a merchant vessel, the *Japan,* but to become the cruiser, *Georgia,* manned by a Confederate crew under Commander William Lewis Maury, a relative of Matthew's. The second was a condemned dispatch boat belonging to the Royal Navy, also a screw steamer, and put up for sale. The order came from Mallory, sent in June of the same year but not received until November. It was naturally a chancy business to get a ship away from a neutral port. The workmen were still busy reconditioning this ship, renamed the *Rappahannock,* when Maury hurried her off with only part of her crew and an officer. The rest joined her in the Channel and she made Calais harbor as a Confederate vessel in distress. And there she stayed, for the French would not permit her to leave port, and there she was when Lee surrendered. The poor ship was familiarly known by Southerners as the White Elephant of the Confederacy. Her only use was that of keeping a Union warship or two lurking outside Calais harbor to pound her to bits if the French slackened their watch on her.

The *Georgia* had a more adventurous time of it, making a seven-months' cruise that took her through Southern Atlantic waters and finally around the Cape of Good Hope and into Cherbourg Harbor, to be refitted. During her cruise she had captured some eight or nine Yankee merchantships and sent them to Southern ports. But neither of these ships was really good for the type of service they were called upon to give. The *Georgia* finally made Liverpool where, in May, 1864, she was put out of commission and sold to an Englishman for 15,000 pounds. Her story did not end there, however. Somehow she got tangled up with the Yankees, was captured in August and taken to Boston to be condemned. After the war the English-

man tried to get damages, but the Mixed Commission at Washington disallowed these on the grounds that she had been bought from the enemy.

There were eight other Naval officers in England trying to buy ships for the Confederacy, several being recalled when Maury arrived. It was a hopeless business.

During this period Maury had moved, in the early spring of 1863, to the village of Bowdon, near Manchester, where Matthew junior was at the Rose Hill School, and doing well. He had been studying under his father through the entire voyage from Charleston to London, and that meant working. Apparently he liked the school and the boys there, and was liked in return. Brave had thoroughly enjoyed the entire experience, especially a magnificent parade in honor of the Prince of Wales' twenty-first birthday during the week in Halifax, and, later, seeing the sights of London. Now he lived in a cottage with his father who wrote his wife "My quiet life here is like the pleasant visions of the night. Brave's sweet company at breakfast in the morning at 8; then he to school, and I to the indulgence of that last great blessing that was uttered in the garden of paradise — work, and the will to work — till five P.M. . . . when Brave's smiling face illuminates the enchanted castle for twenty minutes. He says grace before soup. . ."

On April 8 of this year Maury received news that his son John, Davy Jones, had disappeared on reconnoitering duty and that nothing had been heard concerning him since. This had happened on January 27, but the family had delayed sending the news until all hope of John's return, or of news of him as a prisoner was given up. John was aide-de-camp to Major General Dabney H. Maury, then in command of the right wing of the army holding the lines in and around Vicksburg. On the day of the boy's disappearance General Maury, with his aide

and Colonel Burnett, chief of his artillery, had ridden to Vicksburg for a conference with General Carter L. Stevenson, Chief in Command. The conference over, General Maury asked his two companions to make a reconnaissance of some positions along what was known as the Big Black Road.

Burnett returned to headquarters alone in the afternoon, reporting that when the two had finished with the Road, young Maury had said he wanted to ride on down to a point opposite the mouth of a canal flowing into the Mississippi on the further bank, to take a look-see at what the enemy was doing there. On his way he had to ride along a levee built by a plantation owner to contain the waters of a bayou and keep them from flooding his grounds. Lately this bayou had broken through the levee and was flowing deeply through the wide gap.

When Johnny, as he was called by his companions, failed to return, a party headed by General Maury rode to the levee, news having been brought in that a riderless horse had been seen on the far side of the break-through. As they feared, it proved to be young Maury's gray mare, still saddled and bridled, the reins hanging free. Colonel Burnett, who was with the searching party, was a Texan, used to reading trails, and he gave the tracks left by the mare the closest inspection. There was no doubt but that the horse had been ridden to the opposite bank, but there she had run back and forth confusing the signs. However, Burnett was able to pick out of the medley the distinct sign that she had been ridden at a trot along the levee almost to the river. There she had swung suddenly off it, down into the overflow, then up on it again, and at a gallop back to the break-through. After that she had idled back and forth, and there she was found. More than that, Burnett had found the cliffside of the river broken, signs that a boat had landed, and some empty cartridges of a type not used by the Confederate forces.

made an agreement with an electrical engineer, Nathaniel J. Holmes, who was to be his agent. Holmes was to negotiate with certain agreed-upon powers for the adoption of the Maury improvements and designs in the new system of defense, and grants made by them were to be shared fifty-fifty between the two. This did not apply to Russia, Maury having given to Grand Duke Constantine, in consideration of his "great kindness . . . shown to me and mine when this war broke out," all his discoveries and improvements, for the use of his government. Also Captain Marin Jansen, of the Dutch Navy, who had assisted Maury in part of his experiments, Maury's dear friend ever since the old Brussels Conference — "we are like brothers" — he wrote Holmes, knew everything Maury had done, and had his permission to use the information for his own government, "provided he may be personally benefited thereby." As to any possible negotiations with Mexico, he kept those in his own hands.

By this time Maury had made up his mind to return to his own country, since there was nothing he could do abroad. He took passage for himself and his son on May 2. Before that date the news of Lee's surrender and of Lincoln's assassination had both reached England. Maury did not change his plans, boarding the Royal Mail steamer with a great quantity of insulated wire, copper tanks, all the stuff required for his submarine mines, which had been bought with the expectation of their use by the Confederate Navy in the defense of Richmond. The ship was to land them at Havana, where he hoped to be able to make new plans.

At Havana father and son separated, Brave continuing on to join his family in Virginia. As for the material brought along, Maury had that transferred to the ex-Confederate financial agent, Captain Bullock, who had bought them in England, with,

of course, British gold in possession of the Confederacy. Now there was no Confederacy, and by the rules the property belonged to anyone in whose hands it remained. Maury would have been justified in selling it for what it would bring, probably anywhere between ten and twenty thousand dollars. He did not want any of it.

Mail was waiting for the returned officer in Havana, letters from friends and relatives all begging him not to come to his home yet. Dr. Brodie Herndon wrote that in his opinion it would be decidedly unsafe: "Your absence abroad in a semi-diplomatic character, your prominence, the earnest part taken by you in the cause, would make you a decided object of that 'vengeance against leaders' so openly proclaimed and so plainly visible." And his daughter Betty wrote: "Do not come home. General Lee told me the other day to tell you not to."

But even before these letters and others reached him Maury had decided that the best thing for him to do was to go to Mexico and take up service under Maximilian. He had had a number of friendly contacts with the archduke, having sent him, while he was Commander-in-Chief of the Royal Austrian Marines, a complete set of his *Sailing Directions,* and it was Maximilian who had seen to it that the Austrian gold medal for arts and sciences was conferred upon him. The two had had considerable correspondence in regard to the plan for an alliance between Mexico and the Southern States which, although it fell through, made a pleasant tie. Maury now had an immigration scheme in mind which he believed would interest the young Emperor. And without further ado he set his course for Mexico, arriving at Santa Cruz on June 1.

CHAPTER 16

Mexican Interlude and England Again

WHEN YOUNG Matthew reached Virginia he went to the University, where all the members of his big family were living in the small houses built for the students in the days when there were students. His older brother Richard, who had been badly wounded a second time, was just beginning to get around without crutches. Richard's wife, Sue, and their small son were with him. Diana, or Nannie, with her little girl, had her husband back, after he had suffered nine dreadful months of Yankee imprisonment, and Betty was with them, as well as her two children. Her husband was in Richmond, busy in attempts to retrieve something out of the ruin. Here, too, were the three younger sisters, Molly, Eliza and Lucy, his two aunts, Mary Herndon and Eliza Maury, and Sally Fontaine Maury, his cousin, with three children and her husband.

They all looked different to the boy, for the war and its privations had left their marks on his elders, while the younger ones were considerably grown up in the two and a half years. And Davy Jones, with his jolly smile, his gentle voice —

Brave ran to his mother who opened her arms and held him close while they both sobbed. The old, happy, laughing days, the pleasant home, the easy coming and going, the plans for the future that had seemed so sure — where was all of that? And the father? Left alone, afraid to come to his own State, seeking somehow to create a new home, a new job worth the doing, to get his family back, to live normally again.

Young Matthew had brought letters from his father, letters that revealed his plan of going to Mexico and taking service under Maximilian. He told them his hope was to establish a system of emigration from the South to suitable portions of Mexico, where those who felt it would not be possible to take up existence in the South again, or from whom all opportunity of making a living had been taken, or those whom the Yankees were after in their campaign of revenge, could set up new lives. He had certain other plans for the good of Mexico itself, and he was fairly certain of being given a position of some importance under Maximilian with a good salary. He must be able to take care of his family — he was fifty-nine, and time was growing shorter.

It was a shock to them all, and to his friends. None of them liked it. His family would have preferred his returning to England, taking with him his wife and younger children. If not there, then Russia, or Brazil. Mexico was not the place. The government was uncertain, to put it mildly.

Captain Jansen, his "brother" wrote to the same effect. He wanted Maury to go back to England — "If you had followed my advice you would never have left there, but would have asked Madame Maury to join you." He thought it would be some time, even four or five years, before Maury could return safely to Virginia, "but don't emigrate," he insisted. General Lee was of like mind. "The thought of abandoning (Virginia) and all that must be left in it, is abhorrent to my feelings," he wrote. "I have a great admiration for Mexico; the salubrity of its climate, the fertility of its soil, and the magnificence of its scenery possess for me great charms; but I still look with delight upon the mountains of my native state." He also felt that it would be difficult to remove the people to a portion of Mexico which would be favorable to them, and he ended with these words: "I shall be very sorry if your presence will be lost to

Virginia. She has now sore need of all her sons, and can ill afford to lose you. I am very much obliged to you for all you have done for us, and hope . . . that your separation from us may not be permanent."

But these letters did not reach Maury in time for him to change his plans, even if they would have done so. One cannot say. He had been away from his country during a long period, a period of increasing tragedy and final ruin. But as he had not been in touch with the people themselves, he did not feel the reactions that followed in the same way. Lee, in that same letter, declared that he did not despair, that he looked forward to better days and trusted that time and experience "the great teachers of men under the guidance of our ever-merciful God" would save the country from destruction and restore the hopes and prospects of the past. Maury, from his distance, saw only the utter wreck of the Southern cause, saw his Virginia in the clutch of a ruthless conqueror, homes burned, sons slain, poverty widespread, and no light on the horizon. These letters did not reach him until he was already in Mexico, and committed to his plan, a plan heartily endorsed by Maximilian.

Maury's plan was no less than to colonize Mexico with those Virginians and other Southerners who wished to leave the conquered country. Both races were included, the Negroes chosen from the many who still loved their masters and who were frightened at the new era, at the lack of those safeguards to which they were accustomed. Plantations, houses, ruined. No one to direct them. The new arrivals treated them like equals, or so they said. But vast numbers of them were left without a home, without food, and many were suffering from various pestilences. They did not yet know how to manage their own lives and, stirred by the new freedom so suddenly bestowed, rioted, got drunk, were utterly bewildered and astray.

Maury wanted the white men whose slaves were faithful to them, to emancipate them, of course, but to offer to all who were willing to come, a new home and new labor in Mexico. These were to be bound to serve for a specified length of time, perhaps seven years, while they learned the language, its customs and laws, and how to farm the new land and the different products raised on it. Each would, at the ending of the given period, be assured a home and land of his own. Mexico was wealthy in land and climate, but had a small population, much of it utterly unable to make the best of her many resources. The new immigrants, coming from the shipwreck of their own land, were of the right stuff, whether black or white, "the very materials that are required to build upon good and solid foundations, the Mexican Empire. Never, since the Revocation of the Edict of Nantes, has such a class of people been found willing to expatriate itself."

In a letter written his wife on September 12 Maury gives a picture of his reception, a few days after his arrival, at the Chepultepec Palace which stands so nobly on its wooded hill above the city. The party consisted of the emperor and empress, one of her ladies, four German naval officers and a Mexican official. The emperor entered the room a moment after Maury had arrived, and went at once into the sitting room adjoining his wife's chamber. "He opened the chamber door and said 'Carlotta, here's Mr. Maury.' She came out immediately and commanded me to be seated, the Emperor and the other gentlemen standing. Presently her lady-in-waiting came in; I rose, but she touched me gently on the arm and said, 'The Emperor wishes you always to be seated.' The lady stood also. In a few minutes dinner was anounced. The Emperor led off, and we all followed in single file. As I passed through the door one of the aides — a baron — whispered in my ear, 'On the Emperor's left.' The

dinner — excepting the wines, the number of servants and the liveries — reminded me very much of those Lucy Ellen (Mrs. Maury's sister-in-law) used to give us in our summer visits."

There was probably lively talk at the dinner, but nothing of a business kind until later in the evening when the ladies departed and the emperor dismissed the other men. Then he and Maury discussed the plan of immigration, and Maury came out flatly with the statement that he must transact business directly with him: "I can't manage immigration through the Ministers . . . nor must they have anything to do with it." Maximilian answered, "That's what I intend."

He then told Maury he was appointing him Commissioner of Immigration, with unlimited power to draw on the treasury for operational expenses. He had also his own salary of $5000. Richard, with his wife and son, arrived during October to help his father, and to carry on when Maury took a leave, promised to him by Maximilian, during the coming winter. For by now Mrs. Maury with the four children still under her care, was in England, having sailed at the beginning of the month. She would not go to Mexico, wanting the three girls to receive an education, and she very much wanted to have her husband join her as soon as he could do so.

Already Maury was beginning to have his doubts of the feasibility of making his immigration scheme click. It did not take him long, seeing the emperor intimately as he did, to discover that he was a weak, irresolute man. He was hot one day and cold the next. Everything moved slowly, or not at all. The Mexican government, far from cooperating, appeared unable to offer land at any definite time or cost. Men of the finest type came from the Southern States looking for a home, only to depart, disgusted with the shilly-shallying. The immigration, beginning well, checked, grew less and less, and presently was

going back, or leaving for western America: Texas and California. Much had been done in the beginning, men of standing had come to Mexico during the summer of 1865, men like the Confederate Generals, Shelby, Walker, Kirby Smith, and the Texan, Terrell. Others were Governor Price of Missouri, with Governor Reynolds of Georgia. Men of like rank and standing from Louisiana, Tennessee, North Carolina also emigrated. At Maury's recommendation the Confederate General MacGruder was put in command of the Land Office, with a large number of surveyors under him.

One effort to settle families was fairly successful. Maury sent a committee of three expert men to examine the country near Cordoba, in Vera Cruz. The report was entirely favorable — good climate, good soil, the sea at one side, snow-tipped Orizaba Peak on the other. A colony was settled there in surveyed land and named Carlotta in honor of the empress. The railway to Vera Cruz passed through these lands, a tremendous advantage. Maury wrote his wife "I am now selling these lands to immigrants as fast as they can be surveyed, at a dollar an acre on five years' credit. There are about forty of our people already there. . . . Mr. Holeman, of Missouri, an Episcopal clergyman, with his family — nice people — has been engaged as pastor and teacher. I am going to reserve land for a church, cemetery and schoolhouse. By the time these lands are paid for they will be worth, even if no more settlers come to the empire, twenty, thirty, or even a hundred dollars an acre, for they produce everything under the sun, and yield perpetual harvests."

Son Richard had taken 640 acres in this colony. Others were being settled in Chihuahua, on the river Verde at San Luis Potosi and in Jalisca. Toward the end of February, 1866, two shiploads of immigrants arrived via Havana. They had intended to come by the nearer way through New Orleans, but General

Sheridan refused them permission, for what reason Maury was not then aware.

It was soon after this that Maury left for England, having received permission from Maximilian — of whom he always wrote as Max — together with a most friendly letter from Carlotta. The two poor youngsters were already discounted in Mexico, and death was not so far away for Max, nor madness from his young wife. But at the time of sailing there was no hint of so dark an ending. Simply, things weren't going well, and the Mexican temper was rising against this government imposed upon them by France. Maury sailed, leaving Richard, a fine young fellow, crippled, but not badly, to carry on for him. He was never to see Mexico nor the two young rulers again. The emigration scheme fizzled out. But one benefit Mexico was to owe to Maury: the introduction of the chincona tree which became a great money-making crop in the later years. Even before leaving England Maury had talked over with Clements Markham, then in charge of the India Office in London, and who had been the man to start large plantations of this valuable tree in India, the possibility of introducing it to Mexico. Markham was certain it would grow there as well as in India, using the mountain districts. As soon as Maury got back to England, he saw to it that packages of the seeds were sent to the settlement at Cordoba. The plantations were a success, and cultivation of the tree spread to other suitable parts of the country.

Just before leaving Mexico he wrote his wife from Vera Cruz a happy, hopeful letter. He had climbed Orizaba, nearly dying of cold, but had got a marvelous view of the plains below, themselves four thousand feet above sea level, reporting that the valley "was quilted over with smiling crops in all the stages of growth. The reapers were in golden fields of the yellowest and

brightest barley I have ever seen. The wheat was just coming up, and immense herds of cattle, as they fed on the rich pasture, lent a charm to the valley that made it altogether lovely." Once in the valley he and his party were in the midst of fruits and flowers, oranges ripe, peaches in flower, roses, and, farther down, banana, coffee and tobacco plantations. At Cordoba he was able to talk with men and women from the two shiploads of immigrants who had been forced to enter via Havana. One of the leading men told him that Sheridan had stated he was "determined to break up that Maury nest of Confederates which was agitating the public mind of the South, and preventing the people there from quietly submitting to subjugation." Also, the United States Secretary of State had issued an order requiring all Southerners applying for passports to Mexico to take an oath never to return.

Maury looked over son Dick's acres. Richard had sent to China for twelve or fifteen laborers to work them, and also for a friend of his, "young Crutchfield" to become manager, since he himself was tied to Mexico City. Maury felt very much encouraged, having "such good irons in such good fires that some of them will surely be got to welding heat."

But little more than a month after he sailed from Mexico the emperor wrote him a letter that put an end to all these bright hopes. The members of the Mexican government who had no use for Maximilian and very little more for Americans, from whom they had never yet received anything friendly, forced the emperor to stop all immigration. Maximilian wrote Maury of this, the letter not arriving for some weeks. When it did, Maury realized that the Mexican adventure was over. Several weeks later he wrote the emperor of his grief at the news, adding that, since colonization was suspended, "I fear that my return to

Mexico would tend rather to increase the embarrassments than to smooth any of the difficulties by which Your Majesty is surrounded."

He had been given a sum of money to spend on instruments and on chincona seeds. A balance remained, which he held until he received information as to the person to whom he should hand it over. And that, except for another note from Maximilian, informing Maury he had appointed him a member of the Grand Cross of the Order of Guadalupe, and congratulating him on the completion of the Transatlantic cable which, "while uniting both hemispheres, will continually recall to all minds the debt of gratitude they owe to your genius," was the last of a somewhat fantastic scheme, fruit of a desperate situation. As far as his own country was concerned, no notice of the fact that Maury had done so much to make the cable possible was taken.

On March 29, 1866, Maury once again met his wife and younger children who came up to London from their cottage in Birkenhead, near Liverpool, to greet him. For a moment his two youngest daughters did not know him, Lucy exclaiming "This is not my Papa! This is an old man with a white beard." Except for the brief glimpse of him when, in October 1862, he had bidden them farewell before sailing, and the somewhat rare visits when he was at Richmond and they in Fredericksburg, she had not seen him in almost four years. Grief and anxiety had aged him, it is true, but it did not take long for Maury to seem again the same loving and lovable father she had known.

He laughed at her now, drawing her into his arms, while they all crowded about him, full of eager questions. Brave was grown, a big boy. The girls all taller, really quite young ladies, as he told them. His wife, in her white lace cap, black lace shawl, delicately draped over her shoulders, did not seem to him

much changed. How good, how right it was to be with them again.

"I don't believe I'd have known any of you, except your mother and Brave," he told them. "I may have changed that old brown beard of mine for a nice, new white one, but you girls! Why, you're so grown up you make me feel shy!"

They were all laughing then.

He went back with them to Birkenhead to stay for a week. Brave was at school again, the girls had a tutor, there was a nice maid. But now that he had left the service of the emperor, Maury wanted to get into touch with his London friends to see about finances. He had heard occasionally from Engineer Holmes who had not done anything in regard to the electric mines, but had carefully guarded the information about them in his possession. Now he would take that matter up himself at once. Also he was anxious to see his friend, the Reverend Doctor Tremlett, with whom he had kept up a steady correspondence. The Doctor could give him good advice. There was Captain, now Commodore Jansen, too. So back to London.

Jansen grinned at him somewhat maliciously when they met. Here was Maury, back in England, where he ought to have stayed all the time, instead of running amok over that crazy Mexican plan of his. He teased him as they sat dining together, and Maury confessed that it did seem very good to be back here, among his friends, with his family, in the lovely English spring, with London homey and delightful as ever.

They talked over the possibility of Maury's establishing a sort of school where he could teach representatives of foreign governments for a fee of, well, say five hundred pounds (two thousand dollars) for each country.

"My advice," said Jansen, "is to get out a circular with just the right amount of information, and hand one of these to each of

the diplomats here in London of the countries you select. I feel sure you'll get favorable responses."

It sounded hopeful. By April 25 Maury prepared and had printed the circulars which were immediately delivered to the chosen men. Almost directly there came an invitation from France to lecture in Paris and give a demonstration of his weapon. He accepted, went to Paris the last week in May, where he lectured in French to a deeply attentive group of specialists. The emperor was at St. Cloud and invited the American to give his demonstration in the Seine there. Quite a festival was made of it, Maury was received at the palace, had *déjeuner* with Napoleon, and then arranged it so that his Imperial Majesty should himself touch off the connection. A grand fountain of water spurted high, high into the air, everyone applauded, the specialists were completely satisfied, and Maury not only returned to London with the equivalent in francs of five hundred pounds, but with an earnest invitation from Napoleon III to become a French citizen and take a well-paying position as one of the head men of the Meteorological Observatory at Paris. He liked the idea, but agreed with his wife, who had never lived outside of Virginia before and had only one desire, to return there when that should be possible, so he declined the interesting offer.

On June 5 a dinner was given in his honor at Willis's Rooms in London. The First Lord of the Admiralty presided and the guests were a splendid array, consisting of the Ministers of Denmark, Argentina and Mexico, commodores and other officers of the Swedish and Russian navies, the Confederate General Beauregard, Professor Tyndal, the great scientist, and many personal friends among whom, of course, were both Doctor Tremlett and Marin Jansen. The particular reason for this dinner did indeed hark back to these two devoted, splendid friends. For

the occasion was the presentation of a purse of three thousand guineas ($12,000) to Maury. It was they who first conceived the idea of raising this sum in his behalf from persons in the different European countries who thought highly of Maury and his work. They had just begun to plan the working out of the idea when Maury decided to leave England. Nothing daunted, while he was away, these two and several other good friends started collecting the money. Doctor Tremlett even went so far as to visit Sweden, Denmark and Russia personally to solicit money for this purpose among men associated with navy or scientific work. Grand Duke Constantine alone contributed a thousand pounds. And England had led these different countries in making a fine contribution.

Now, a little more than two months after Maury reached England, the three thousand guineas had been subscribed. At the end of the dinner Doctor Tremlett, who was the Honorary Secretary of this Testimonial Fund, handed to the guest of honor a silver-gilt casket containing the sum, and with it a card engraved with the following appreciation:

"We, the undersigned, beg your acceptance of the accompanying purse of Three Thousand Guineas in appreciation and acknowledgment of the eminent and disinterested services which through years of untiring zeal in the cause of science you have rendered to the maritime nations of the world. Receive from us this public testimony of our regard with every wish for your future welfare and happiness."

Maury was so deeply moved at this totally unexpected and generous testimonial of what his friends, and naval and scientific men in different countries, thought of him that he could not at once answer the gracious, warmhearted words Doctor Tremlett had used in making the presentation. His reply was brief but, as one of those present said, "it was both genuine and noble."

By this time Maury had rented a comfortable little house in London for himself and his family. Birkenhead was deserted, young Matthew now attending the School of Mines, the girls continuing their own studies under a visiting tutor. Here peace and happiness sat with them, friends were numerous, and Maury was deep in congenial work. Representatives of Holland, Sweden and Norway came to London to take his course of instructions. In addition, that July, an agent from a publisher in New York came to Maury with an order to write a series of geographies for the public schools. The series was to include *First Lessons in Geography, Intermediate Geography, Manual of Geography, Academic Geography,* and his old joy, *Physical Geography.* Five volumes. Maury was to receive in all $10,000, a thousand on the delivery of each manuscript, a thousand more on its publication. In addition, he would receive $600 for revising each book, for five successive years. Here was work after his own heart. He had not taught his own children so long without knowing how to write for school children, and no topic could have appealed to him more. He got to work at once. By the next year the publishers were so pleased at the hearty reception given the first book that they signed a new contract for a volume on *Practical Astronomy for Schools.* For this Maury was to be given $3000 divided as before.

Before Maury and his family left England, in the summer of 1868, he had pretty nearly finished these books, although only the first two had been published, in 1867, the title of the second having been changed to the livelier one, *The World We Live In.* His son Brave drew the maps.

These books held the flavor and the spirit that were Maury's. In the first, a small volume of sixty-odd pages, he put into his Preface the information that his student readers were to be taken on imaginary voyages, twice circling the world, once by water,

once by land. He ended this Preface with a sentence that put briefly his idea of teaching, an idea he had not seen used in his native land: "The teacher should *teach,* as well as *hear recitations.*" His second book, a hundred pages in length, was afterward merged with the first under the title of *Elementary Geography.* Later it was published under the better title of *New Elements of Geography.* These books were republished year after year. In the 1922 edition of the *New Elements* there is in the Preface this interesting comment:

"Maury refused to follow the plan of all accepted text books of that day. His plan was to present, in simple words and in the form of a story, interesting facts about the different peoples of the earth, their homes, their industries, and the lands where they live; and at the same time to call attention to those physical laws which largely determine the condition, the character and the industry of a people." Surely an excellent idea. But a new idea, hence many teachers shied away from it. The Preface continues, "But leading educators have gradually come to Maury's position, and today the principles he advocated are endorsed by the Committee of Fifteen of the National Education Society."

What a way the man had of being ahead of his time!

When Maury went to England on this second visit there had been some talk of his being associated with the laying of the North Atlantic Cables Britain was putting down. But when it appeared that the only thing wanted was Maury's name, for which the Company offered him a thousand pounds, he declined.

As to the first Atlantic Cable, to whose construction and placing Maury had, at the urging of Cyrus W. Field, given so much thought, time and advice, with no question of reward, the story is different. When, on November 15, 1866, the New York Chamber of Commerce gave a dinner in honor of Field and his

Cable, that gentleman made only the slightest, casual allusion to Maury. A year and a half later, on July 1, 1868, the day Maury sailed for home, another dinner, given in London, at which Field was again guest of honor (a somewhat ironic honor) the name of the man whom he had once called friend and to whom he had so often appealed for help, that name had completely disappeared from Mr. Field's reminiscences.

Before leaving England, this time never to return, Maury was highly honored by the University of Cambridge, which conferred upon him the degree of LL.D. Alfred, Lord Tennyson, received the same degree at the same ceremony. Mrs. Maury and the two daughters, Mary and Lucy, were taken along, all of them being guests of the vice-chancellor. It was, of course, a colorful and rather splendid ceremony, with a long Latin oration by the dean, everyone in cap and gown, and as always was followed by the loud and sassy remarks which the undergraduates, seated in the galleries, made as to the deportment and general behavior and appearance of the new doctors, and others present, like the two young Virginian maidens, for whom one student called for three cheers, cheerfully given, while another called out his special admiration for "the lass in the blue bonnet." It was rather startling to the Americans, but possibly not disagreeable.

Before leaving England Maury decided to become a regular member of the Episcopal Church. Brave and Lucy were both to be confirmed, and he joined them. The ceremony of confirmation was performed by Doctor Quintard, the visiting Bishop of Tennessee, in London to attend the Pan-Anglican Convention, at Doctor Tremlett's church. Maury's old friend, the first bishop, had died. The bald, white-fringed head bowed between the two young golden-brown ones before the altar made a touching picture.

While at Cambridge Maury gave a lecture, partly to rouse interest in England in the University of the South at Sewanee which badly needed money. He affirmed, too, as always, that he did not consider science and religion as separate and hostile, contending that, rightly interpreted, the Bible and Science were as one.

Maury was returning at last to a Virginia that wanted him, and to a position he was thoroughly fitted for. To be sure, the General Amnesty would not be passed until May 22, 1872, but Virginia was due to resume control of her own government and be freed from the military rule imposed by the Federals, in the coming year. Moreover, the attitude toward Confederate officers and leaders had changed. It was, his friends wrote him, entirely safe to return, and they all wanted him back. He had various offers, one from the University of Virginia as to a possible professorship in astronomy, one from the University in Tennessee to become a vice-chancellor of the struggling institution. He could not accept this, as he had to think of an income, and Sewanee looked very shaky in that matter. The offer he did accept came from the Virginia Military Institute. He was to have the Chair of Meteorology at a salary of $2000 a year. The immediate work he would undertake was a physical survey of Virginia. He was not to hold classes nor deliver regular series of lectures, but to undertake creative work, suited to his genius. It was this that attracted him particularly. In addition, a new house was to be built for him and his family, and the heartiest of welcomes was assured them. Lexington was a good and lovely town. His wife was radiant. It wasn't Fredericksburg, but it was Home.

His daughter Nannie Corbin, with her child, had joined them in England in 1867, after the house on their plantation, Farleyvale, burned down, while her husband undertook the rebuild-

ing. While she was with her parents, she bore a son, named after the lost young officer, John Herndon Maury, the Davy Jones of the old days. His grandfather adored him, and the two became chums later on, in Virginia, when he came on visits with his mother, and was often left to stay on, to the delight of both grandpapa and Johnnie. The little fellow spent only a short time in this world, however, dying unexpectedly in 1873, only ten days after Grandpapa had gone. Perhaps they needed each other.

The whole party sailed from Liverpool, arriving in New York on July 16, 1868. To Matthew's surprise, he was treated at the port with the greatest consideration, all luggage passed without any difficulty. And so on to Richmond, where there was a positive ovation in his honor.

CHAPTER 17

The Last Four Years

IT WAS to be close to a year after his return before Maury would take up his work for the Military Institute. His house would not be ready for him before that time, and he had a good deal of preparatory study to do; moreover, it was decided that it would be as well for him to begin with the opening of the new college year. But he was to be installed on September 10, his salary to begin at that time.

An invitation from the management of White Sulphur Springs, whose head was an old friend of the Maury family, to spend the summer there, was good news. The heat of Virginia's summer was something of a trial after the cool English climate, or even that of Mexico City, with its elevation of nearly seven thousand five hundred feet. The Springs would be a charming place to become acclimated again, and the ravages of war, so plainly marked across Richmond, Fredericksburg and Norfolk did not obtain there. Almost directly west of Lexington, right on the border in West Virginia, it was near enough to make it easy for Maury to go to the Institute for any consultations or discussions in regard to his new work that might be worth while. Nor was it too far for visits from other members of the family, and Richard, with his wife and child, came for a week's stay. Dick had lost some of the bitterness over the defeat and his own crippling as time went on, and with his little family was settled not far away in West Virginia where, with the money earned in Mexico, he had bought a home and farm. His father

was delighted to see how greatly he had improved, both in bodily and spiritual health.

"I'm glad to be back, Father, and I can see you are. To be sure, I'm not in the South, since West Virginia split away from us; but it's south for all that, and I've found work I love and I can do. As for you, the Institute is lucky to get you. So is Virginia, and this work you'll be doing is just the thing for both of you. How Brave has grown up, and what a good chap he is! He tells me he's to study at the Institute, get 'finished up' there, he says. I'll probably be sending my boy there before we know it. He's coming along, be ten soon, and you take in your fresh cadets at twelve or thirteen."

This was like the old Dick, and his father rejoiced.

"Are you coming for the coronation, Dick?"

"Coronation," his son laughed. "So that's what you call it, eh! I think I'll have to. I hear they mean to make an occasion of it. I saw Governor Letcher when I was in Richmond just before coming here, and he'll be there — maybe to put the crown on your head. . ."

They chuckled together.

On September 10, according to schedule, the "coronation" took place, and Matthew Fontaine Maury was duly welcomed as a new member of the faculty. Governor Letcher made a speech in which he praised this son of Virginia as a man known to the entire world, or at least to all that great part of it interested in seaborne travel wherever and whatever. The instructions and the information he had published had been translated into every civilized language, and today as in the past were constantly called for. Moreover he had suggested, and endeavored to put into practice, a system for weather information on land which, some day, would doubtless be helping farmers and agriculturists generally, even as sailors had been helped.

The Superintendent of the Military Institute, Francis H. Smith, made his own speech, telling his audience how proud he and his confrères were to welcome such a man into their group. A man who had refused the plea of France to become her citizen, and to hold a distinguished position at a salary far greater than Virginia could afford, preferring, so soon as it was safe for him to come, to return to his own State and his own people.

The ceremonies were held in the open air, on a platform built for the occasion in front of the Superintendent's house. Among the distinguished guests sitting in the semi-circle of chairs arranged behind the speakers' desk, was Robert E. Lee, now Rector of Washington and Lee College, whose grounds adjoined those of the Institute. Mr. Lee was delighted to see his friend again, and to know they were to live near each other. The delight was reciprocal. Here was a great man, in victory or defeat, a man to be loved and honored. To be his near neighbor, as Maury told him, was in itself a tremendous inducement toward accepting his new position.

The new professor's speech was eloquent of his deep satisfaction in being once again privileged to work in his own country, and to be able to devote whatever knowledge he possessed to helping Virginia achieve the high post she could hold in the future they were all facing. Most of the talk was a commentary on the sciences, treated with that colloquial ease and utter absence of "side" which characterized the speaker. It seemed to him, so he declared, that the scientist was among the happiest of men, for not only was his work useful to the world, but it was in itself fascinating. With each forward step, his interest increased, while his delight in one discovery was but a prelude to what lay ahead as he moved onward to the next — nor was there any ending along the shining path except his own mortal span. The path itself had no end.

The nine months to pass before Maury took up his home at the Institute were crowded full of work — it wouldn't have been Maury had they not been so crowded. He moved back to Richmond with the girls and his wife, leaving young Matthew to study at his new school. The man had a number of items to engage his active mind. There were certain preparations to make anent the work to be done in his new job, these as it were "sailing directions" in regard to Virginia's resources in industry, mining and particularly agriculture, with whatever else of value his researches might discover. In regard to agriculture, he had already begun to interest the Institute's faculty in the feasibility of adding an agricultural course to its curriculum. Much was to be done in that direction to bring Virginia to the top of her productivity, which could be enormous. Then, quite a different, and yet an allied subject, was the building of the Chesapeake and Ohio Railway, which would not only give passenger service, but be of tremendous value as a freightline to take Virginian products west. Maury traveled considerably about the State on lecture tours explaining the need of this railway, visited leading men in both the Virginias, and was valuable in putting the plan through. Another scheme which meant transportation to and from Virginia was the direct steamship line which he helped to work out with Commodore Jansen, running between Norfolk and Flushing, Holland.

In one of his first lectures (and he was asked everywhere, and paid variously, according to the ability of those who asked him) which was given in October at the County Fair in Staunton, he made the frank statement that he had heard, both in England before leaving, and from Northern friends, that there was a very general impression that the South, since the war, had lost both initiative and energy.

It was to be expected, he agreed, that an aftermath of fatigue,

even something approaching despair, should follow upon defeat after four terrible years, and the loss of so much of the youth of the country. Many of the great families were utterly ruined. The change from slavery to free labor brought vast difficulties. Money was hard to find. All true. But it must be remembered that Virginia had vast possibilities in her waterpower, still practically undeveloped. The use of that would repay much of the loss of hand labor, once mills were working. And he believed Virginia would do well to seek the immigration of Germans and families from the Low Countries, good farmers, good citizens, people who would prove a valuable asset. We must not rest on the past, he insisted, but look forward, begin now to build for the future. He believed they had a State worth their devotion and their labor, as it had been worth the sacrifices in the war.

In June the family moved to its new home. He wrote to his beloved Doctor Tremlett: "Here we are in our new home, busy fixing up; and things begin to know their places. So we also begin to have a home-feeling. People are very kind, the country is beautiful, the views and scenery lovely, and both climate and air such that exercise is enjoyment."

There was a great feeling of satisfaction among them all as they settled down into the pleasant house, in its charming situation, not far from the great wrought-iron gates leading into the Washington and Lee grounds. Home. Congenial work, people friendly, kind, a few known of old. No more knocking about, no more separations. Matthew doing excellently as a student.

"I'll have to look to my laurels, young man," his father remarked, grinning cheerfully, having read the reports his son handed him. "It'll be Matthew junior, not senior, the Institute is going to be proud of."

"They'll keep us both busy, anyhow," Brave answered. "It's

very good to be in our own home here, I can tell you, much as I've liked being in with the cadets. You see, if I get in a tight place with my studies, you can help me out — and I'll run errands for you in return."

Mary and Lucy were away, spending some weeks with their married sisters, but Eliza was with her parents, greatly enjoying the social activities both of the Institute and the College. Except for some reading she was through with her studies, grown into a lively, pretty girl, a great chum of her father's and mother's.

Maury lost no time getting to work, especially on the physical survey of the State. As before, in the days when he started the *Winds and Currents,* he got into touch with all manner of people who could help him. He wrote to farmers, to leading men in positions likely to give them an opportunity for special observation, to any and everyone whom he knew, of whom he was told, who were likely to have or to be able to get information of the kind he wanted. Presently the answers began coming in, a steadily increasing flow. He told his wife he was renewing his youth, that it was like the old days when the sea captains began to send him notes and observations.

"Those girls of ours won't be calling me an old man long, my dear. I shouldn't wonder a bit if my hair began turning brown again. What you have done so perfectly, kept young through all our tribulations, I'll get back to doing."

"I could have shaken those girls," his wife stormed, half-laughing. "You never looked old. But I must admit you do look years younger already — and much happier, my dear husband."

They smiled into each other's eyes. True husband and wife, true friends and tried comrades, they had known grief and separation and wild anxiety, they had come through them, into

what Matthew called "this busy haven where we've dropped anchors."

Busy it was. While he continued work on the survey, which had two aims, the primary one to assist the State to realize and to develop her resources, the secondary to attract the right kind of immigrant, he was also working on his geographical school series. The volume to be called *Academic Geography* was renamed *The Manual of Geography* with its plan somewhat altered. This finally appeared early in 1871. It received great praise from the critics. The point that amazed all of them was that the entire subject was made absorbingly alive and interesting. Here indeed was something new — from the man who was always fathering just that. When in 1880 a revised edition was published by the University Publishing Company, the revising done by a member of the family, Mytton Maury, the Preface carried this interesting summary:

"Among the marked excellencies of the early edition was the presentation of geography in the character of a science rather than an assemblage of disconnected facts. Land and air and ocean were treated as parts of a grand mechanism; rivers were discussed not simply as 'divisions of water' but as having definite 'offices' to perform; mountains were not merely masses of a certain altitude, but regulators of rainfall. It was also carefully pointed out how the geographical position and climate of a country determine its industries. Trade was shown to be in a special manner under the influence of geographical law."

When, in 1912, the book was revised once more, under the auspices of the American Book Company, the new publishers had the good sense to proclaim that they had had Maury's own text retained except where actual revisions were needed. It was retained because it was "so clear, simple and attractive that it had won for the book the uniform favor of the teachers using

it." They went on to say that "Maury's geographies never belonged to the old school, but rather to the new. Being devoted to the study of physical geography, and father of the science of 'Physical Geography of the Sea,' he undertook the preparation of his book originally with the intention and purpose 'to redeem the most delightful of subjects from the bondage of dry statistics on the one hand, and on the other, from the drudgery of vague, general ideas.' "

One could almost wish that the whole of Maury's life had been devoted to education, education, that is, as it could be taught in the schools, either in his day or in our own. Much time and a weary waste of words could have been saved the youth of our country, and a real insight into what thrilling fields education can lead the student, even and perhaps especially, the very young student, might have been achieved. He was able to convey the sense of joy and of excitement to be found in study; the spirit of adventure has led man through all the ages to acquire fresh knowledge concerning the amazing life story of this world, and all that pertains to it or surrounds it, and it is this spirit that shines through the whole of Maury's life, and which he was therefore able to put into his work, into his words.

Thus the geographies Maury wrote for his publisher, Richardson, were popular and paid both author and publisher well. In 1871 the series had cleared more than $30,000, being used by some five thousand schools throughout the South, with an average of forty books to each school. Of this sum Maury received his percentage. With the first of the next year a new agreement was reached between author and publishers, the firm name now having been changed to the University Publishing Company. This agreement ran as follows:

"I have sold you the copyright *in this country* to all the books, five in number, and wall maps, eight in the series, and you have

paid for them in full. I am to revise and by new editions keep the said five books up to the times, for five years, for $1000 in gold a year, counting from January 15, 1870. Two of these annual instalments have become due, for each of which I hold your note. The eight wall maps in place of the fourth school geography originally contracted for, were to be published in my name, but constructed at your expense and under my control so as to justify me in claiming their authorship. Besides this you have generously volunteered to pay me *during my life* ten per cent upon the copy money annually coming to you upon any and all of the books and wall maps aforesaid."

The firm had been in financial trouble before this, and in 1869 Maury was on the point of suing for money owed him, but his New York cousin, Rutson Maury, advised him not to do so, and the firm met all its obligations after its reconstruction.

At the Military Institute the new professor made his first address to the graduating class three weeks after settling in his home. He gave very few lectures to the cadets, since that was not his job, but when he did, he was received with enthusiasm. He always pleaded that the students should never think of education as finished. Education was never ended so long as intelligence remained alive. On each foundation new foundations were built, and wider, more important horizons opened.

The first two years he made few trips away from the Institute on lecture engagements. He was thoroughly occupied with his Survey, bringing out a *Preliminary Report* in 1870. This was later followed by a second *Report,* both done with the exactitude, carefulness, breadth of suggestion which are inherent in all of Maury's work. But by 1871 he came to believe it would be better to leave the Institute. There was so little money forthcoming for his Survey that the work could not be carried on as he felt it must be. "I have worked out the Physical Survey as far

as it can be worked out without money," he wrote Doctor Tremlett at the end of that year. "And I feel that I am not earning my salt. So, after the swallows come, I shall begin to inquire about lodgings in Fredericksburg or Richmond. In all, except the salt-earning feature, my situation here is as delightful as man can make it."

But the Board of Visitors and the Faculty of the Institute felt very differently, and when Maury handed in his resignation in the month of May, 1872, to take effect in September, they protested so firmly, assisted by Governor Letcher, that he withdrew it, at any rate for the time being. He had already received offers from two other institutions, the first in 1870, when he was offered the presidency of St. John's College at Annapolis, which he declined, although the salary was a thousand dollars more than the Institute allowed him; the second, early the following year, the presidency of the University of Alabama, at a salary of $3500 with the privilege of choosing his own faculty.

He refused this also, but one of the men on the Board of this university came to see him, raising the salary to five thousand. Even then Maury was reluctant. But after thinking it over, and being told he would be given time to arrange affairs at the Institute, he decided to accept. For one thing, the warmer winter climate of Alabama appealed to him. His rheumatism or gout or whatever, probably arthritis, gave him great trouble in the winter. So he sent a telegram, July 30, "I will come." Two weeks later he resigned, having found that the offer made him was unauthorized, and that the University was quite unable to make any satisfactory money arrangement. Meanwhile one of his geographies, the *Manual,* published about then, carried on its title page, "By Matthew Fontaine Maury, President of the University of Alabama." It was all very trying and Matthew Fontaine Maury made up his mind, as he also wrote to Tremlett, that

he would never again make any agreement by word of mouth. There was another, and more agreeable result. One of his Navy friends, an Alabaman, Raphael Semmes, who had commanded the famous Confederate ship *Alabama,* was delighted to hear that Maury had accepted the position. So he wrote a eulogy in noble style, published in the Montgomery *Advance,* September 25, 1871. It was rather long, and its style can be gathered from this quotation, with which it wound up:

"Thou hast revealed to us the secrets of the depths of the ocean, traced its currents, discoursed to us of its storms and calms, and taught us which of its roads to travel and which to avoid. Every mariner, for countless ages to come, as he takes down his charts to shape his course across the seas, will think of thee! He will think of thee as he casts his lead into the deep sea; he will think of thee as he draws a bucket of water from it to examine its animalculae; he will think of thee as he sees the storm gathering thick and ominous; he will think of thee as he approaches the calm belts of the equator, with its mysterious cloud rings; he will think of thee as he is scudding before the 'brave west winds' of the Southern hemisphere; in short, there is no phenomenon of the sea that will not recall to him thine image. This is the living monument which thou hast constructed for thyself."

The Captain may have been over-sanguine as regards "every mariner." But it is a revelation of what one of them, and a very famous one, thought of Maury.

In October 1871 Maury lectured before the Agricultural and Mechanical Society in Tennessee, at Memphis, where he had visited so often and for which he had done so much. Again he returned to his old love, meteorology for the land. Again he spoke of the value it would be for agriculture, again insisted that it should not only be countrywide, but worldwide, to reach

its full opportunities. He could say now that much of the necessary machinery already existed. There was the Signal Office where weather reports were continually received by telegraph, there was the Agricultural Bureau, issuing its reports, which, without added expense, could embody detailed information. This talk, which roused the Tennessee Society to take resolutions that the United States Government be petitioned through its State Department to favor a plan of universal telegraphic meteorological observations and crop reports, and to call another conference of the type that had met in Brussels in 1853, he followed with many more, in widely separated parts of the country. He also asked Senator Johnson of Virginia to call upon the Commissioner of Agriculture and put the resolutions before him. But the senator was received so rudely and the conversation was cut so short he saw it was useless to push the thing. The commissioner told him he had just ordered the meteorological reports his predecessor had been collecting and publishing to end, and that he would have nothing to do with the matter. "I was sorry indeed," the senator wrote Maury, "that a scheme so useful should be so treated."

But Maury, undaunted, kept on. He was able to tell his hearers in the different cities where he spoke that such men in Europe as Buchan, Secretary of the Meteorological Society of Scotland, Commodore Jansen, Quetelet, and half a dozen others of equal fame and standing in other countries, were ready and eager for the establishment of such a service. Six southern states had passed resolutions in favor of it. He was also able to say that the plan held nothing personal for him. He owned no farm, he would never be given any governmental position at Washington. Through the fall of 1872 he spoke to groups of farmers and scientific men not only in the south, but in Boston, New York, Buffalo, Detroit, Chicago. He reached St. Louis on Octo-

ber 8, and spoke the next day, addressing the St. Louis Agricultural and Mechanical Association at its annual Fair.

But he could hardly be heard.

He had not been really well for a long time. Part of the winter of 1870–71 he had spent in his sister, Mrs. Halland's, home at Holly Springs in Mississippi and with another sister in New Orleans. Young Matthew and one of the girls went with him. The change seemed to do him good and he planned another southern stay for the coming winter, not having been able to get away during the past year. But he suffered considerably with his gout through the summer of 1872, writing his cousin Rutson in mid-July that "the foot took me bad the day before yesterday. Yesterday it had me on crutches, and in the agonies there came a fainting fit, about 5 P.M. But this morning I feel better, though still on crutches." In this same letter, however, he speaks cheerfully of the coming work. "I am to go to Boston on September 18th to deliver an address by invitation, and in October to do the same at Griffin, Georgia, St. Louis and Norfolk. The Board of Visitors won't accept my resignation; speak in dulcet tones about my presence here. . . I put it to the vote this morning at breakfast, 'V.M.I. or Richmond?' Unanimous for V.M.I. So here we rest for the present at least. (This was about the time he withdrew his resignation from the Institute.) The British Association wants me at Brighton. C. Burrows, the Mayor, 'requests the honour of my presence,' August 14th, and they have kindly made arrangements with the Cunarders to take me there and back. . . It would be fine to set the British Association at work upon my meteorological and crop convention; but I'm too poor — I must decline."

His wife tried to persuade him to give up his lecture tour when September came, for although the foot was no longer bad, she knew he ought to stay home, rest, and prepare for the com-

ing winter. But all the arrangements had been made, even extra engagements to speak agreed upon. It meant needed money, and he had plenty to talk about. Not only the weather and crops theme. He also wanted to urge farmers to cooperate and so oppose the growing transportation monopolies that were making things hard for them. They should join to fight the various agencies that were harrying them. He believed that Congress should give domestic commerce the same careful attention it gave to foreign trade, should control tolls and tariffs in transportation, should stop the high-handed actions of the railroads, should improve interior waterways and canals. He thought the railroads should be greatly increased, with east and west trunk lines connected by many branches, and that these must be built without added taxation. He wanted the commerce between the different states regulated, and he believed in the need of immigration.

So he had gone to keep his promises to speak, until he broke down in St. Louis. He was in bed there for nearly two weeks before he dared make the journey home. As he got out of the carriage and came toward his home his wife with the two youngest daughters ran to meet him. Leaning on his wife's arm he crossed the threshold, paused and said slowly, "My dear, I am come home — to die."

CHAPTER 18

Twilight and Evening Bell
And one clear call for me . . .

THERE WERE four months left to Maury when he came home to die, most of them in bed, although he was able to sit up in the reclining chair in his pleasant bedroom for an occasional hour or two after he recovered somewhat from the great fatigue and severe pain following upon his return. Ulceration of the stomach was the cause of his death; at a later date in the history of medicine he might have been cured, for he had a strong constitution and enormous vitality, and was only just past his sixty-seventh year at his death. Yet a few days before that birthday, January 14, 1873, his wife, from the couch where she rested and kept watch, heard him in the darkness of the night, praying that the Lord would forgive him the few years he lacked of man's allotted span, and take him home.

He was not idle all the while, not Matthew Fontaine Maury. With his daughters to help him he dictated his last revision of the *Physical Geography of the Seas.* He read a great deal, particularly in the Bible, but he enjoyed having as many of his family as were available in his room, the women doing their sewing, everyone chatting, he often showing that playful humor which had made them laugh so often. In December he was made very happy by a visit of a week from his brother-in-law, Dr. Brodie Herndon, with whom he had spent a fortnight during his trip south two winters back. Brodie and Matthew loved each other like blood brothers, and it is possible the Doctor had come think-

ing he might do something in regard to this illness. But he told the family he could not give them any real hope. Doctor Madison, physician for the Military Institute, seemed to him to be doing all there was to do.

Most of all Maury wanted his family about him, and as it became more evident that he could not live much longer, the Corbins, with a new grandchild, a girl of only a few weeks, came to stay in Lexington. Wellworth had rebuilt Farleyvale and put the plantation back into production, a joy to Nannie's father. That was what he hoped for all Virginia, and he liked to think of the children growing up in that true Virginia home. Richard, his son, came from West Virginia to be with him until the end. Brave was, of course, living in the house, with the three younger sisters; Betty and her family came from Richmond. In the evenings his daughters took turns reading favorite portions of the Bible to him, and before leaving for the night they would all sing some beloved hymn. But they talked too, cheerfully, telling little stories of the children, asking advice as to this or that.

More than for any single thing the dying man was glad because, even to the very end, he was able to see and recognize each one among them. "You see how God has answered my prayers, for I know you every one. I shall retain my senses till the last. God has granted me that as a token of my acceptance."

He told them that for thirty-four years he had repeated a prayer, composed for himself after he had broken his leg, and he asked that each of them, and his grandchildren, would learn it and use it every day. It is a simple petition, asking for no material blessing, and goes this way:

"Lord Jesus, Thou son of God and Redeemer of the world, have mercy upon me! Pardon my offences, and teach me the error of my ways; give me a new heart and a right mind.

Teach me and all mine to do Thy will, and in all things to keep Thy law. Teach me also to ask those things necessary for eternal life. Lord, pardon me for all my sins, for Thine is the kingdom and the power and the glory for ever and ever, Amen."

He had always loved the psalms, and the one hundred and seventh was among those he loved best, with its lines:

They that go down to the sea in ships, that do business in great waters,
These see the works of the Lord, and his wonders in the deep.

Another, which he asked to have read him several times during his last days was the hundred and thirtieth. He called it De Profundis, because of its first line:

Out of the depths have I cried unto Thee, O Lord.

His steadfast, gentle, simple faith shone out from him. He was able to say as the end drew on, "I have set my house in order, my prayers have all been answered, my children are gathered around my bed — and now, Lord, what wait I for?"

On his last evening they sang the hymn, *Christ is Risen.* As it closed, he stretched out his hands and said slowly, distinctly, "The peace of God which passeth all understanding, be with you all — all."

The following morning toward noon, February 1, 1873, he asked his son Dick, who had hardly left him for the last two days, "Are my feet growing cold? Do I drag my anchors?"

Dick told him yes. And he answered faintly, "All's well."

A little while later he asked that his wife and daughters should leave the room, in order that they might not be distressed by seeing his last struggle. His two sons and two sons-in-law remained. But his daughter Diana, his Nannie, lingered where she could watch him and yet not be seen herself, and through

her tears she saw him lift his arms toward heaven like a little child wanting to be taken up.

Before his death he had asked his daughters to write to Commodore Jansen and Doctor Tremlett to tell them how much their friendship had meant to him, how greatly he loved them. And to Tremlett he sent gratitude for having been a means of bringing him into the church.

He had no preference as to where he should be buried. "My parents, my dead brothers and sisters, my boy John, who lies I know not where, are all widely scattered." But when his wife told him she would like to have him lie in the Holywood Cemetery in Richmond, where she herself wished to be buried, he answered gently, "Very well, my dear; then let my body remain here until the spring, and when you take me through the Goshen Pass, you must pluck the rhododendrons and the mountain ivy and lay them upon me."

Often he had passed through the lovely, wild gorge where the North Anna breaks through the mountains, and where in spring and early summer the rhododendron bushes were a glory of bloom beside the banks and up among the boulders, and the ivy, or Virginia creeper, twined and hung from the trees along the sharply winding, somewhat difficult stage road that made its way to the nearest station of the Chesapeake and Ohio Railroad.

As it happened, it was not until the following autumn that his family was able to carry out his wish. The flowers were gone, but the maples were golden, the laurel boughs deep green, the creeper rose and scarlet, and the cortège stopped while wife and children gathered the autumn glory to lay upon him.

Two days following upon his death, Monday, at four in the afternoon, his body was taken to the hall of the Library of the Military Institution, where it lay in state until noon on Wed-

nesday. The gallery and supporting pillars of the hall had been draped in black, the great maps constructed under Maury's supervision adorned the walls and on opposite sides of the hall hung two crape-draped flags, one that of Virginia, the other of Tennessee. Near the bier in the center of the hall, was placed a large globe bearing the inscription:

The whole world is mourning for Maury.

The coffin had been carried from Maury's house on the shoulders of twelve commissioned officers of the cadet battalion in full-dress uniform, followed by the Faculty of the Institute. It was placed on the black-draped bier and the lid removed. A pall was thrown across the lower part of the dead man's body, leaving his face and chest uncovered. On his chest were pinned the Orders granted him by the kings and rulers of foreign governments. He seemed to be lying at ease, with a smile, gentle, peaceful, on his lips. He looked distinguished and handsome.

The Faculty, preceded by the corps of cadets and followed by most of the staff of Washington and Lee, as well as a large attendance from the town, passed before the bier to look their last on the man they loved and respected. Slowly the hall emptied, leaving the solitary sentinel to tread his measured beat back and forth, back and forth.

Lee was not among these mourners. He had died in October, 1870, and it was Maury who had mourned for him, and who later had attended the ceremony when Lee's name was officially added to that of Washington, and the college raised to the status of a university.

On Wednesday at noon the Reverend William Pendleton, D.D., of Grace Church in Lexington, of which Maury had been a member, held a solemn funeral service before the bier. Then the coffin was placed in a hearse, drawn by four led horses, the

senior class of the Institute acting as pall-bearers. The rest of the cadet batallion followed, with the Faculty, professors and students of Washington and Lee and many citizens. All business houses in Lexington were closed, the bells of the churches tolled, and from the Camp came the timed firing of the guns. At the vault in the town cemetery, opposite the grave of "Stonewall" Jackson, the body of Maury was left to await the journey to Richmond.

When that time came the hearse was once more accompanied by cadets, professors and friends as far as the river, a mile away. Some few even went as far as Goshen Pass, fifteen miles, among these Superintendent Smith.

On September 27 the burial in Holywood was private. Maury lies between the graves of Presidents Monroe and Tyler. Young Matthew wrote Commodore Jansen that he liked the site particularly "because it faces the bright green country and overlooks the rapids of the James, the sleeper there being always lulled by the murmur of running water, a sound which he loved to hear."

The gravestone carries the dates and places of birth and death, and the words he spoke so short a while before dying, *All's well.* On the back of the shaft is the brief information: *Entered the Navy of the United States* 1825 — *That of the Confederate States* 1861 — *Author of "Maury's Sailing Directions" and "Physical Geography of the Sea."*

It took many years for his own country to realize fully how great a citizen it had had in Matthew Fontaine Maury. There was not an atom of self-glorification in his makeup. He was enormously interested in his work, not for what it brought him or might bring him, but for its own worth. He wanted only enough money to take care of his family decently and to lay by, if possible, something for their safety after his death. If he had

had a more intelligent Congress to deal with, much of great importance to the country he so dearly loved would have been accomplished years earlier than when, after his death, other men took and carried out his ideas and the value of the publicity he gave them, in wearying travel to lecture in many States and many more cities. In his *Wind and Weather Charts* and *Sailing Directions* he had no need of getting the assistance of Congress, and he was fortunate in several instances in having Secretaries of the Navy who were patriotic, far-seeing men, glad to lend him all the help they could. This, of course, was not the case after the Civil War broke, and the dull, cheap politician, Mallory, was able to prevent the full manufacture and use of the electric torpedo Maury invented and perfected, as well as to quash his plans for a defensive Navy. His sympathies for the Southern cause were deep and convinced; he did all he could to prevent the differences between the two sections of the country from ending in war; when it came he left the creative work he loved, broke up his family and came to the service of his State because he believed it to be the right thing to do.

Immediately after his death articles appeared all over the world, praising both the man and what he had done. Hardly any scientific publication from the greatest to the least but was glad to witness to the globe-embracing value of his work, of his discoveries, his service to science.

One charming tribute was printed on February 10, following his death, in the *New York Herald,* signed "A British Sailor," evidently sent in from a ship in American waters. This unknown sailor wanted to start a fund to which all seafaring men could show their gratitude and appreciation of what Maury did for them by contributing for the benefit of the dead man's family. The *Herald* at once offered to receive subscriptions. Other papers in many parts of the country, including two French pa-

pers published in the United States followed the *Herald's* lead. But when Maury's widow was told of this, her daughter Diana relates "she was deeply moved, and exclaimed to her children, as she burst into tears, 'No, no! If your father has left me a little, that little shall be enough. Write at once to the papers and tell them I do not wish to have a subscription started on my behalf.'"

This was done.

The General Assembly of Virginia, Senate and House of Delegates concurring, passed resolutions expressing both their grief at Commander Maury's death and the high estimation in which he was held, not only for what he had achieved "but as a Christian gentleman and as a Virginian who loved his native State with a warmth beyond comparison."

After this, which was in truth a flood of appreciation, silence and forgetfulness followed, so far as any but his friends and family were concerned. Fifteen years passed, and Maury's name was forgotten, what he had done ignored, much of it claimed as the work of later comers. Then a book was written by his second daughter, Diana Fontaine Maury Corbin, the *Life of Matthew Fontaine Maury* and published both in America and England in 1888. Once again Maury's name came into the public prints in the many reviews published in both countries, and many persons who had known Maury either as friend or scientist or navy officer, or all of these, wrote the author. One, the well-known writer Thomas Nelson Page, who had known him personally, wrote the widow, thanking her for the copy sent him, and telling her "I trust you may live to see the services he rendered mankind suitably commemorated by a monument worthy of him. But whether you do or not, the time will assuredly come when he will be recognized by our people as an honor to the race from which he sprang."

Mrs. Maury lived until 1901, but that was not long enough. Two years after her daughter's biography appeared, some stir was made in Congress to have $20,000 appropriated to be used for putting up a monument to Maury in Washington. There was chatter, but nothing else. Before that, soon after his death, his beloved friend, now a Rear Admiral, Marin H. Jansen, suggested that the building of a lighthouse on the Rocas Banks off the coast of Brazil, could make a fitting memorial. Various Geographical Societies took up the idea, but the general opinion was that the United States should inaugurate the plan. And as the United States remained entirely uninterested, the matter went no farther.

About the time that the effort to build a monument in Washington fell through the Daughters of the American Revolution toiled, and continued to toil for something like fifteen years, to interest our Government in building a lighthouse on the Rip-Raps in Hampton Roads, off Old Point Comfort, Virginia, as a monument to Maury. As the Jamestown Exposition of 1907 began to materialize they joined in a great push to put this plan through, announcing that it would be unveiled, if you can unveil a lighthouse, as part of the Exposition ceremonies. This drew another blank.

Eight years later the Superintendent of the Naval Observatory at Washington came along with the suggestion that a memorial building to hold the Hydrographic Office and other work of the Observatory, for which there was no longer room in the original building, should be built on the grounds of the institution and dedicated to Maury. This, too, came to nothing.

But in that same year, 1915, a citizen of Richmond, Mrs. E. E. Moffit, took hold. She founded the Matthew Fontaine Maury Association on May 11 with three aims in view. The first was to get Maury's name into the Hall of Fame in New York City.

The second to have the State Board of Education of Virginia appoint January 14 in memory of Maury's birthday, as Maury Day in all the schools. This was done on June 27 of the next year. One triumph. The third object was to raise a monument to Maury in the city of Richmond. In this, too, the energetic lady and her associates succeeded. Subscriptions were opened, the Legislature of the State contributing $10,000, but then the first World War halted contributions until it was over and supposedly done with. The United Daughters of the Confederacy then took over the job of raising funds, school children doing their share by giving $2000, and finally $60,000, the required sum, was raised. William F. Sievers was selected as the sculptor, and the dedication took place in November, 1929, Harry Flood Byrd, Governor of Virginia at that time, unveiling the monument and making the address.

The figure of Maury, one and a half life size, is seated at ease on a great chair placed against a massive shaft which is surmounted by a globe having the continents and islands in low relief. Supporting and surrounding this globe, which is nine feet in diameter, are two groups of life-size figures. One shows a farmer with his wife clinging to an ox in a tornado, the other an overturned lifeboat with women and sailors struggling in the curve of a mighty wave. The whole monument is most effective.

In 1923, in Goshen Pass, through which his body moved fifty years before, another smaller monument was raised in Maury's honor. To an oblong, roughly hewn granite shaft is affixed a bronze tablet, with a bas-relief of Maury's head within a circle, in medallion form, and beneath that an inscription in which the picturesque phrase, Pathfinder of the Seas, is used, possibly for the first time. It also appears on the Richmond monument. The Goshen monument is the work of the sculptor Giuseppi

Moretti, and was authorized by the Virginia Legislature, as "A Tribute by his Native State, Virginia," to her great son. At the base lies a huge anchor, one of the kind in use in Maury's time, with a mighty length of chain twined about it and carrying from post to post of the small enclosure in which the monument stands. This anchor was presented by the Virginia Pilot Association of Norfolk.

Some eight hundred miles out from Brazil there is a group of three sky-pointing volcanic isles the highest of which was named for Maury in 1923 by Captain George Finlay Simmons, heading an expedition, fathered by the Cleveland Natural History Museum, to collect specimens.

There are other memorials. The Virginia Military Institute has named the Hall in which the physical sciences are taught, Maury-Brooke Hall. Brooke was the man who invented the deep-sea sounding apparatus while working with Maury mapping the ocean floor, and always referred to by Maury as "Deep-sea Brooke."

The United States Navy in latter years has honored him in different ways. Not only does his name appear at the top of the charts used by the Hydrographic Office but in 1918 it named a destroyer after him. At the Naval Academy in Annapolis the superb west wing of the Academic Building carries Maury's name. This was ordered in 1915, by the then Superintendent of the Academy, Captain W. F. Fullam, in recognition of Maury's "distinguished and world-wide reputation in connection with meteorology."

These are the more important memorials honoring Commander Maury since his death in his own country. There are several smaller ones, such as the inscription of his name among other famous Virginians on the frieze of the Rotunda in the University of Virginia, while his portrait painted in fresco is to

be seen on the ceiling of the Library of the State Capitol at Nashville, Tennessee. It leads all the rest, if not in artistic quality, in age, since it was painted there in 1857.

Perhaps the simple words of the Dean of Cambridge when presenting Maury for the honorary degree of LL.D. in 1868 will serve as a summing up:

"I present to you Matthew Fontaine Maury, who, while serving in the American Navy, did not permit the clear edge of his mind to be dulled, or his ardor for study to be dissipated, by the variety of his professional labors, or by his continual change of place; but who, by attentive observation of the course of the winds, the climate, the currents of the seas and oceans, acquired those materials for knowledge which afterwards, in leisure, while he presided over the Observatory in Washington, he systematized in charts and in a book — charts which are now in the hands of all seamen, and a book which has carried the fame of its author into the most distant countries of the earth. Nor is he merely a high authority in nautical science. He is also a pattern of noble manners and good morals, because in the guidance of his own life he has always shown himself a brave and good man. When that cruel civil war in America was imminent, this man did not hesitate to leave home and friends, a place of high honor and an office singularly adapted to his genius — to throw away, in one word, all the goods and gifts of fortune — that he might defend and sustain the cause which seemed to him the just one. . ."

All that, and this too. That he was gay of spirit, a wonderful talker, greatly cherished by his friends, greatly beloved by his family, honorable, sincere, glad of his work, glad of his life. A man worth his salt, in the good old phrase, practical, yet a genius. A man whom it is good to know.